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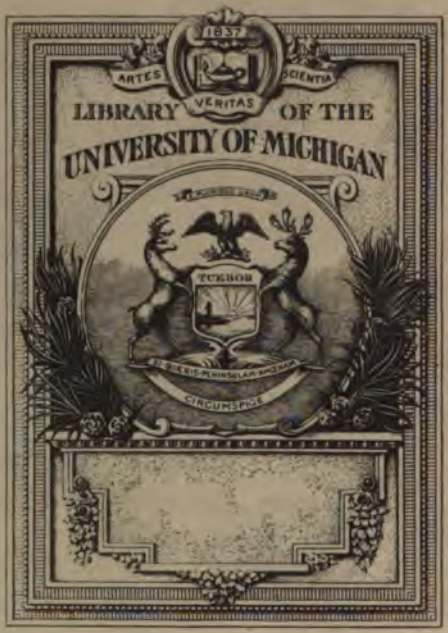
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STUDIES IN THE SOCIAL SCIENCES NUMBER 11

A STUDY OF STATE AID TO PUBLIC SCHOOLS IN MINNESOTA

BY

RAYMOND ASA KENT, Ph.D.

Sometime Assistant Professor of Education in the University of Minnesota

MINNEAPOLIS
Bulletin of the University of Minnesota
April 1918

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General

PREFACE

Education is not a charity; it is a public duty. It took the people of this country many years to recognize this principle. Gradually the rights of sovereignty changed from groups that voluntarily taxed themselves to groups that compulsorily taxed themselves. Gradually these groups extended their influence until they taxed all the property of the state for the education of all the children of the state. This relationship between democratic society and popular education is one that the people of this country feel with responding devotion. The Federal Government long ago recognized the principle that its strength and safety depend upon the general level of intelligence maintained by its citizens. As early as 1875 it established its policy of granting lands to the states for the maintenance of schools. Since then other land grants have been made, and in addition large sums of money have been appropriated for the teaching of Home Economics and Agriculture.

In every state there has grown up a permanent school fund, which combined with the revenue raised by taxation is used for the encouragement of public education. There are two fundamental principles or purposes governing the distribution of this money: one is the equalization of educational opportunities and the other is the stimulation of local educational sentiment. Apparently the administration of state funds for the purpose of realizing these principles has resulted in many evils. Injustice, inequality, and inequity frequently characterize the distribution of state moneys for school purposes. Equality of educational opportunities does not exist. Instead of stimulating local educational sentiment communities are frequently pauperized. The consequence is that practically every state is concerned just now with the problem of securing a more satisfactory and equitable distribution of state aid. Progress thus far has been made by more or less blind experimenting. State school funds have not infrequently been subject to legislative jugglery. Unfairness and injustice have often resulted. Practically no attempts have been made to work out a sensible program. No practical studies or investigations are available with the exception of Mr. Kent's. Mr. Kent's study of state aid in Minnesota thus represents a pioneer attempt to study one of the most important problems relating to our social welfare. That it should be duplicated in many states every one will admit, and that it should be used as the basis for determining a more sensible and rational program in our own state, every one who is familiar with the local situation will agree. Not every question relating to state aid is answered by Mr. Kent, but he does deal with the more fundamental considerations. The careful and systematic development and solution of his problem commends itself to the scientific man, and should commend itself to the wise citizen and the competent legislator.

L. D. COFFMAN

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A STUDY OF STATE AID TO PUBLIC SCHOOLS IN MINNESOTA

CHAPTER I

PROBLEM AND DATA

A. Problem

The biennial Legislature of Minnesota in April, 1913, created a Public Education Commission "to make careful study and investigation of conditions in this state with respect to public education, including the public school system and public educational institutions, and the relation of the educational institutions one to another and to the public school system; to recommend a general plan for the organization and administration of public education and public educational institutions. The general purpose of the Commission shall be to effect economy and efficiency with respect to the several branches of public education in this state."[1]

The Governor appointed as members of this Commission: W. D. Willard, cashier, First National Bank, Mankato; W. G. Crosby, attorney, Duluth; J. A. DuBois, physician, Sauk Centre; Marie Lovsnes, county superintendent of schools, Norman County; W. F. Webster, principal of East High School, Minneapolis; J. A. Hartigan, president Farm Mortgage Bond Company, St. Paul; C. G. Schulz, state superintendent of education. The Commission organized in June by electing W. D. Willard as chairman, and the writer of this study as secretary.[2]

The report of the Commission[3] does not include any comprehensive statement of the method or of the data on which its conclusions and recommendations were founded. After the Commission had concluded its work the data compiled were placed on file in the office of the State Superintendent of Education.

As stated above, the work of the Commission was "to effect economy and efficiency with respect to the several branches of public education in the state." A part of the problem was to determine where economy could be most reasonably looked for and how the test of efficiency could be applied. So far as these problems affect the state one would naturally think of them first as applying to the funds which the state distributes as its share of the support "to the several branches of public education."

Especially does this application seem the proper one in the light of the total amount of money thus involved annually. "Minnesota's permanent school fund . . . . is now, in round figures, $25,000,000, and is expected to reach $100,000,000, or even $200,000,000, from the sale of

[1] *General Laws of Minnesota*, 1913 ch. 571.
[2] *Report of the Minnesota Public Education Commission*, 3, 7.
[3] State of Minnesota, Public Education Commission, *Report to the Governor*.

school lands and timber and the royalties on iron ore.[4] The income is approximately $1,000,000 a year."[5]

"The state adds to the current school fund for distribution in the same way, the proceeds of a one-mill tax, which now yields above $1,250,000 a year."[6]

"State aid to schools for special purposes, now amounting to $2,000,000 a year, is distinct from the school funds and is given from the general revenue funds."[7]

Here, then, is a total of four and a quarter millions of dollars given by the state each year to its public schools.

Plainly and simply asked, the inquiry becomes: What is the effect of state aid? Is state support securing satisfactory results commensurate with the amount of money given? These questions have never been answered. When one tries to secure evidence outside of Minnesota that might help in answering them, one finds a similar dearth of information.

State aid to high schools was begun as early as 1871, in Maine.[8] Wisconsin was the second[9] and Minnesota was the third state in the Union to make such provision,[10] but up to the time of this investigation, as far as we know, a careful study had never been made as to how state aid was actually affecting public schools. So far as we know no aims that have been set up and no statements of accomplishments in connection with state subsidy of public education have been based on any careful, intensive study. The Commission, therefore, was face to face with finding its own answer to its inquiry.

FORMS OF AID

As will be explained more in detail in Chapter II, there are two general forms of state aid. The first is the current school fund, which is distributed to all schools, irrespective of their classification, number of departments, enrollment, or any factor,[11] except the number of children between six and twenty-one years of age attending public school forty days or more during the year.[12] The second form of aid includes special aid to each of the following groups of schools:

1. High schools
2. Graded schools
3. Semi-graded schools
4. Rural schools
5. Consolidated schools

[4] For further explanation see Chapter 2.
[5] *Report of Minnesota Commission*, 21, 22. See also Appendix C.
[6] *Report of Minnesota Commission*, 22.
[7] *Ibid.*
[8] Johnston and others, *The Modern High School*, 51.
[9] *Ibid.*, 52.
[10] *Ibid.*, 53.
[11] Except the legal length of the school year, which is practically no condition now. See table 35.
[12] References to all legal data are given in Chapter 2.

Aid for special departments in high or graded schools is of three kinds:[13]

1. Aid for departments of teacher training
2. Aid for the three industrial departments—agriculture, shop work, and home economics
3. Aid for agriculture and either shop work or home economics

The ramifications of special state aid are complex. They have become so because a school may receive more than one form of special aid.[14] But whatever the combinations of aid received, for purposes of aid distribution, all schools are classed in one of the fundamental divisions of high, graded, semi-graded, or rural.

Inasmuch as special state aid to industrial departments comprises so large a part of state support to high schools,[15] this particular form of aid was made a special part of the investigation and a separate chapter of this report is devoted to it.

Among the forms of special departmental aids we are not particularly concerned here with the one for teacher-training departments. These departments sustain relations to the high school, to the community, and to the state entirely different from the other specially aided departments. They were not established, nor are they maintained, for the benefit of the local community, for the children of the community, or for the pupils of the high schools of the state. Their primary purpose was and is to benefit the rural schools of the state.[16] High school, high school community, and pupil benefits are quite secondary to their aim. For this reason the state has from their inception consistently pursued the policy of almost if not quite complete support of such departments. They exist for the state as distinct from the community. Notwithstanding their tremendous importance, the money spent for them has such different purposes to serve from those of other funds about which we are here concerned that teacher-training departments are considered only incidentally. In determining the total amount of state subsidy which a high school district received in a given year, special aid for teacher-training departments, therefore, has not been included.

Our problem, then, becomes one of a study concerning state aid to

1. Certain separate groups of schools
2. Special departments of work

We wish to find out: first, what these schools or departments receive in special aid from the state; second, what the effect of this aid is upon the schools or departments; third, whether the aid now given is productive of educational "efficiency" and "economy."

[13] For changes in force in 1915, see Appendix B.

[14] This fact is made clear in Chapter 2.

[15] Only two graded schools, one at Lewiston and one at Westbrook, had taken advantage of this support up to the time of this study. See *Eighteenth Annual Report of the Inspector of State High Schools*, 39; *Nineteenth Report*, 34, 35; and *Twentieth Report*, 52, 53.

[16] See *Thirteenth Annual Report of the Inspector of State High Schools*, 37.

The problem is treated in two aspects. One chapter is devoted to a brief historical summary of the legislative enactments which relate to state support of public education since Minnesota was created a territory. By far the greatest proportion of the report, however, deals with the problem from a study of its statistical aspects.

In the remaining chapters, therefore, the following divisions of subject matter are treated:

a. Historical summary of legislation concerning state support.
b. Special state aid to high schools.[17]
c. Special state aid to graded schools.
d. Special state aid to rural schools.
e. Special state aid to industrial departments.

B. Data

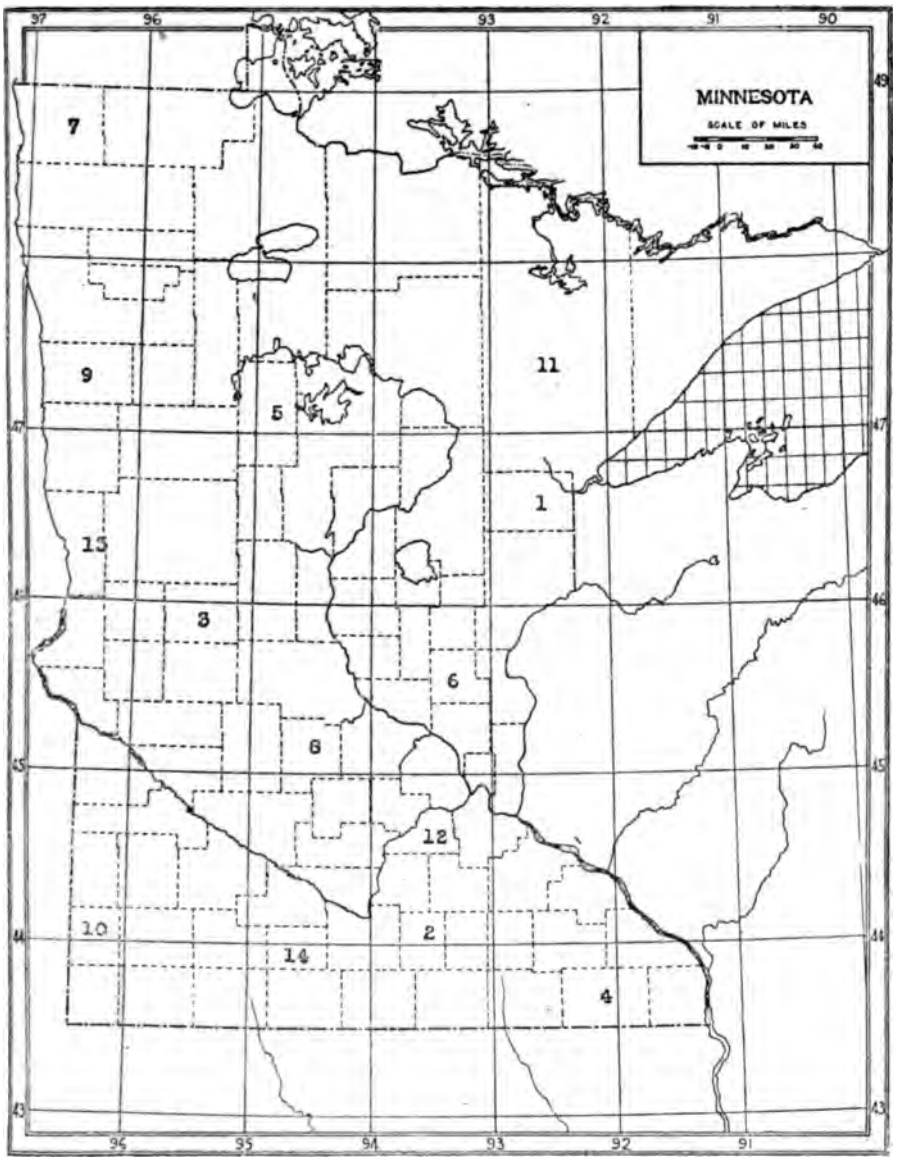
SOURCES OF DATA

In trying to determine what facts should be collected from which the desired information might be obtained, it was soon discovered that certain basic information was as essential concerning one group of schools as concerning another. In the beginning, therefore, there was no need to divide the schools into the three main groups in seeking information.

The latest school year for which data were then available was 1912-13. That year there were 216[18] high schools and 217[19] graded schools in Minnesota receiving state aid. It seemed quite feasible to attempt to collect information from each of these several schools. On the other hand, there were over 7,500[20] districts maintaining schools classified as semi-graded and rural. To collect the desired information from each of these districts was impracticable and unnecessary. Some plan of selecting typical rural schools, chosen from the various parts of the state so as to be truly representative of the entire state would satisfy the purpose, require much less work, and give quite as satisfactory results as to attempt to include all of the 7,500.

The plan finally adopted was that of selected counties. The state as a whole was surveyed. Certain counties distributed over the state were chosen because they were representative of the whole state—geographically; educationally, so far as rural schools were concerned; economically; industrially; and socially, as to distribution of population. The number of such counties that should be included was not fully decided upon until the selection had been fairly well determined. It was then decided that fourteen counties would satisfy the conditions and needs of

[17] Each of the school divisions will be described in detail in the next chapter.
[18] *Twentieth Annual Report of the Inspector of State High Schools*, 36.
[19] *Eighteenth Annual Report of the Inspector of State Graded Schools*, 8.
[20] *Eighteenth Biennial Report, Superintendent of Public Instruction*, 16.



Fourteen counties used in rural school computations

1. Carlton
2. Dodge
3. Douglas
4. Fillmore
5. Hubbard
6. Isanti
7. Kittson
8. Meeker
9. Norman
10. Pipestone
11. St. Louis
12. Scott
13. Wilkin
14. Watonwan

the problem. The location and names of the fourteen counties are shown in the accompanying outline map of Minnesota.

Table I shows one of the pages used for the tabulation of the data first collected. The first space to the left gives the number of each district. In column 1 is stated the total enrollment of each school for the school year 1912-13. Column 2 gives the number of pupils enrolled for whom the current fund money was given their district for 1912-13—that is, the number of pupils who attended school in each district forty days or more that year. Column 3 gives the number of total days attendance for the pupils in each district. Column 4 gives the average number of days attended per pupil enrolled. Column 5 states the number of teachers employed in each district that year.[21] Column 6 contains the sum of the figures for the same district as listed in columns 7 and 8. Column 8 states the amount of money raised by special school tax levied upon the assessable property of the district for the year 1912-13. Column 7 contains the sum of the figures for the same district as listed in columns 9 and 10. Column 9 states the amount paid the district by the state because of the number of pupils listed in column 2—that is, it states the amount of the current school fund which the district received for 1912-13.[22] Column 10 states the amount of special aid which the districts received for the same year. Column 11 gives the assessed valuation of the districts, and column 12 is the rate of special local school tax in mills. The figures in the first five columns were obtained directly or indirectly from the original reports of the county superintendents, which were on file in the office of the State Superintendent of Public Education. The figures in column 2 are those which were actually used by the State Department of Education for distribution of the state apportionment fund. The figures in columns 11 and 12 were furnished directly to the Commission at its request by the county auditor of every county of the state on the blank shown in Table II. The amount in column 8 was in every case secured by multiplying the assessed valuation by the rate of special school tax. The amounts in columns 9 and 10 were taken directly from the original lists on file in the office of the State Superintendent. Column 13 states the per cent which the amount in column 7 is of the total amount in column 6, that is, the proportion (per cent) that all money received from the state is of a district's total school revenue for support in 1912-13.[23] The information covered by the

[21] Number of annual teaching positions. If one instructor worked four months and another five, in the same district, this counts as only one for the year.

[22] In discussing any class of schools the current fund is treated as part of the total state aid. For the year which this study covers it amounted to about $5.30 per annum per child attending forty days. This is a large enough part of the total per capita cost to be considered of material value to the local community in supporting its schools. The fact that the method of distribution of the current fund is different from that employed in the case of any other aid given is no reason for studying this fund separately from special state aid.

[23] None of these figures includes the amount raised for bonded indebtedness. The county auditors did not include in the special local school tax the amount of mills levied because of bonded indebtedness.

above outline was secured for as many as possible of the rural schools in the fourteen counties.

The number of rural districts which it was finally possible to include from each county chosen is as follows:

1.	Carlton	23
2.	Dodge	74
3.	Douglas	88
4.	Fillmore	166
5.	Hubbard	61
6.	Isanti	62
7.	Kanabec	61
8.	Meeker	86
9.	Norman	91
10.	Pipestone	66
11.	St. Louis	51
12.	Scott	63
13.	Watonwan	54
14.	Wilkin	65
		1,011

TABLE II

..... COUNTY

I certify that the following is a correct statement of the school tax rate and assessed valuation for the school districts of..... County for the school year ending July 31, 1913.

Signed

.....

County Auditor.

SCHOOL DISTRICTS

Include in the special school tax the local 1-mill but not the state 1-mill.

NAME OR NUMBER	ASSESSED VALUATION	SPECIAL SCHOOL TAX	NAME OR NUMBER	ASSESSED VALUATION	SPECIAL SCHOOL TAX

Information similar to the above was obtained also for as many as possible of the graded school districts and the districts maintaining high schools. In these two latter groups, out of all the districts maintaining

graded schools, 206 were finally included; and out of all the high school districts, 197 were included.

Most of the basic data concerning special departments in the high schools were secured from the original reports sent by the schools to the State Inspector of High Schools.[24] A copy of one of these report-blanks is shown in Table III.

The distribution of the time of the instructors in departments receiving special aid was checked by correspondence with the superintendents of the several schools involved.

Other data are to be found in this study. The sources of such data are stated at the appropriate places.

TABLE III

Special Instruction Statistics. Return not later than June 15.

INDUSTRIAL DEPARTMENTS
OF THE

.....High or Graded School

For the school year 1913-1914

INSTRUCTORS:		INSTITUTION	
Name	*Position*	*Where Educated*	*Salary*
.....	Superintendent	.....	$.....
.....	Agriculture	.....	.....
.....	Home Economics	.....	.....
.....	Shopwork	.....	.....
		Total	$.....

ENROLLMENT:

Agriculture:	*Home Economics*:	*Shopwork*:
High School.....	High School.....	High School.....
Short Course.....	Short Course.....	Short Course.....
Grades.....	Grades.....	Grades.....

EXPENDITURE:

Agriculture:

Salaries (Not including Superintendent).....	$.....
Real Estate.....	.....
Agriculture.....	.....
Home Economics.....	.....
Shopwork.....	.....
Not Classified.....	.....
Total	$.....

Attach a typewritten statement of expenditure showing the outlay in each of the three departments. This statement should be itemized to show in a general way how the money has been spent. It must be certified by the secretary of the board.

[24] The use of these reports covering the year 1912-13 was kindly allowed the Commission by Mr. George B. Aiton, at the time State Inspector of High Schools.

TABLE III (*Continued*)

ASSOCIATION:

No. of associated districts..... Total area of associated districts ..... Area of central district.....

No. of pupils from associated districts in central school..... Amount of tax contributed by associated districts $..... Amount of tuition charged to home districts of non-residents $.....

On page two state service rendered to associated districts.

Let each special instructor add a signed statement (preferably typewritten and on paper of this size) of the methods and the activities of his department, including class work, field work, extension work, meals served, articles of farm utility, school gardens, etc.

Instruction (fill these forms) 1.

AGRICULTURE:

SUBJECT	NUMBER WEEKS	CLASS	ENROLLMENT	LENGTH OF RECITATION

HOME ECONOMICS:

SUBJECT	NUMBER WEEKS	CLASS	ENROLLMENT	LENGTH OF RECITATION

TABLE III (*Continued*)

SHOPWORK:

SUBJECT	NUMBER WEEKS	CLASS	ENROLLMENT	LENGTH OF RECITATION

EXTENSION WORK:

Farmers' Short Course

Length in days of short course.....Attendance.....

Farmers' Institute

Dates when held.....

.....Total attendance.....

Rural Meetings

No. held.....Total attendance.....

Other Meetings, Contests, and Fairs held.....

.....

Signed.....

Superintendent

C. SOURCES OF ERROR

I. RURAL SCHOOLS

1. Some may object to the method by which the districts were selected. A selection by counties, it may be asserted, is less representative of the state than a random selection of the same, or even of a less, number of districts from the entire state with every county represented. The presumption of *representativeness* in several items is the reason why each of these counties was originally chosen. This presumption is verified by the distributions as they appear later in the statistical tables. They approach normal distribution.[25]

2. The regular meetings of the Legislature are biennial. All forms of special aid received by any of the schools come solely from legislative

[25] See also Woods, *The Influence of Monarchs*, 27.

appropriation. It sometimes occurs during the year of legislative recess that the number of schools accepted for a particular form of aid is larger than was contemplated. The aid is then prorated among all those schools that year. The Legislature at its next meeting almost without fail makes up in part or in whole the amount of the previous deficiency, and this deficiency appropriation is distributed during the school year following the legislative session.[26]

Was 1912-13 a year when such a deficiency might have been distributed as additional state aid? If so, was there such aid actually distributed that year?

The regular sessions of the Legislature are held beginning in January of each odd-numbered year. The Legislature convened in January, 1911.

There was no reimbursement in special aid. There was a deficit to every class of rural school except the semi-graded.[27]

State apportionment, which is included in this study as a part of the state's contribution to the local district, though it is not special state aid, is in no way affected by legislative appropriation.

The result of the first condition is to make the effects of state aid less noticeable than they would be if the aid had been paid in full. Both positive and negative figures of correlation are smaller than they would be if there had been no deficit for the year which the study covers.

3. The correlation figures are not corrected for attenuation; they are gross. The nature and sources of the data made such correction out of the question.

All scientific work presupposes that the measurements of facts are as nearly accurate as possible. There will, however, in such measurements as these commonly be considerable error in each individual fact of those to be related. One district might have levied a much larger tax one year than ordinarily. For sound reasons another district might have found itself with a greater surplus than usual and so for the year in which we happened to study it, it might have levied a school tax much less than its usual levy.

To correct this kind of an error (called attenuation) arising from chance, it is necessary to have at least two independent measures of the items to be related, or to have data from a larger area. In this case we ought to have data covering two years instead of one year, in all these items.

The result of this lack of attenuation is to make the correlation figures in all probability less than they would have been if corrected for attenuation.[28]

[26] See deficiency appropriation amounts, table at end of Chapter 2.
[27] *Eighteenth Report, Superintendent of Public Instruction*, table 1, p. 10.
[28] Adapted from Thorndike's *Mental and Social Measurements*, 127-129.

II. HIGH SCHOOLS

1. There is no source of error from selection. Over ninety per cent of the total number of cases were included.[29]

2. There is no source of error from reimbursement because there were no shortages in aid to be made up to high schools or to any of their departments.[30]

3. All that has been said with regard to non-attenuation of rural school figures of correlation applies with equal force here.

4. In computing the costs of instruction in high schools there has not always been as accurate a distribution of every instructor's time as could be desired. In figuring the cost of academic instruction there is an equivalent of individual distribution by including all the time of all the instructors. In the cases of special instruction the total time of each instructor was accounted for as far as it could be done. The special reports from the industrial departments to the State Inspector of High Schools included such information in only a negligible number of cases. Definite data for each school were secured through personal correspondence with the school's superintendent. There is probably some error from this source, but it is very small.

5. Statements of expenses in these special departments (see Table III) are not so accurate as one wishes they might be. This is particularly true in the departments of agriculture. Under this division were presumed to be placed expenses for maintenance. By the actual statements of the reports, however, equipment expenses were sometimes included. Where they were so listed they were subtracted. That equipment was included in instances where it was not so itemized, is but to be supposed.

The Commission felt the desirability of securing accurate data here. It realized, however, the impossibility of such an undertaking in the time allotted. In not a few cases, the reports had attached to them some statements of expense from the local boards of education. From examination of these reports and from over ten years of personal acquaintance with school boards of districts from graded to city systems, some of which time has been spent attempting to ferret out separate items of maintenance, support, etc., from the reports of a salaried clerk, the writer believes that under the conditions of school accounting now prevalent in the state these reports are as accurate as are any available for a representative group of high schools in Minnesota. This belief is supported by those with wider and longer experience in the state in these matters than the writer has had.

The crudeness, from the scientific point of view, of such data and the unreliability of results computed from them are fully realized. There are

[29] See accompanying list.

[30] *Eighteenth Report, Superintendent of Public Instruction*, 10.

some things to be said in favor of including the data, however. In the first place, the presentation of the data so gathered with an understanding of their unreliability, and the reason for the same, may hasten better accounting and the possibility of authentic information for future computations. In the second place, the item of greatest proportion and importance in even such expensive departments as shop work and agriculture is that of salary, and the data on this are reliable. In the third place, these reports are the bases for the distribution of the special state aid to these departments, and therefore, though inaccurate, bear a relation to the amount of aid distributed that is both logical and of significant importance. In the fourth place, some concepts of the respective costs of these departments, inaccurate though they may be, can not but help to clear the situation. We know that the state has been distributing large sums of money for these special departments. Our idea of just how and where this money has been used and how justifiable its local consumption, has been entirely lacking, vague, or based merely on personal opinion. The state has sorely needed standardization in determining these matters. The first step in this direction, short and faltering though it may be, more than justifies itself. In the fifth place, some of these specific items can be and have been compared with and checked by investigations elsewhere. In this way an idea of the nature and of the amount of error can be more definitely and accurately judged.

HIGH SCHOOL DISTRICTS INCLUDED IN THIS STUDY

Ada	Blackduck	Dawson
Adrian	Blooming Prairie	Delano
Aitkin	Brainerd	Deer River
Akeley	Breckenridge	Detroit
Albert Lea	Browns Valley	Dodge Center
Alden	Buffalo	Eagle Bend
Alexandria	Buhl	East Grand Forks
Amboy	Caledonia	Elbow Lake
Annandale	Cambridge	Elk River
Anoka	Canby	Ely
Appleton	Cannon Falls	Eveleth
Argyle	Cass Lake	Excelsior
Arlington	Chaska	Fairfax
Atwater	Chatfield	Fairmont
Aurora	Chisholm	Faribault
Bagley	Clarkfield	Farmington
Barnesville	Cloquet	Fergus Falls
Belle Plaine	Cokato	Fertile
Bemidji	Coleraine	Fosston
Benson	Cottonwood	Frazee
Bird Island	Crookston	Fulda
Biwabik	Dassel	Gaylord

Gilbert
Glencoe
Glenwood
Graceville
Grand Rapids
Granite Falls
Hallock
Halstad
Harmony
Hastings
Hawley
Hector
Henderson
Herman
Heron Lake
Hinckley
Hibbing
Hopkins
Houston
Howard Lake
Hutchinson
International Falls
Jackson
Janesville
Jordan
Kasota
Kasson
Kenyon
Kerkhoven
Lake Benton
Lake City
Lake Crystal
Lake Park
Lakefield
Lamberton
Lanesboro
LeSueur
Le Sueur Center
Litchfield
Little Falls
Long Prairie
Luverne
McIntosh
Mabel
Madelia
Madison
Mankato
Mantorville
Maple Lake
Mapleton
Marshall
Milaca
Minneota
Montevideo
Monticello
Montgomery
Moorhead
Mora
Morris
Morton
Mountain Lake
New Prague
New Richland
New Ulm
Northfield
North St. Paul
Norwood
Olivia
Ortonville
Osakis
Owatonna
Park Rapids
Paynesville
Pelican Rapids
Perham
Pine City
Pine Island
Pipestone
Plainview
Preston
Princeton
Red Lake Falls
Red Wing
Redwood Falls
Renville
Rochester
Royalton
Rush City
Rushford
St. Charles
St. Cloud
St. James
St. Louis Park
St. Peter
Sandstone
Sauk Center
Sauk Rapids
Shakopee
Sherburn
Slayton
Sleepy Eye
South St. Paul
Springfield
Spring Grove
Spring Valley
Staples
Stillwater
Stephen
Stewartville
Thief River Falls
Tracy
Two Harbors
Tyler
Virginia
Wabasha
Wadena
Walker
Waseca
Warren
Waterville
Wayzata
Welcome
West Concord
Wheaton
White Bear
Willmar
Windom
Winona
Winthrop
Worthington
Zumbrota

III. GRADED SCHOOLS

1. There is no source of error from selection. Nearly ninety-five per cent of all possible cases were included.[31]

2. There was no reimbursement, because there had been no shortage.[32]

[31] See accompanying list.
[32] *Eighteenth Report, Superintendent of Public Instruction*, 10.

3. The same principle regarding attenuation holds here as with rural and high school computations.

4. There were no instructional costs computed for graded school districts.

GRADED SCHOOL DISTRICTS INCLUDED IN THIS STUDY

Ashby
Avoca
Audubon
Badger
Balaton
Barnum
Barrett
Battlefield
Battle Lake
Baudette
Beardsley
Beaver Creek
Becker
Belgrade
Bellingham
Belview
Bertha
Big Falls
Big Lake
Bingham Lake
Boyd
Braham
Brandon
Brewster
Brook Park
Brooten
Browerville
Brownton
Bruno
Buffalo Lake
Burtrum
Byron
Campbell
Canton
Carlton
Carman
Carver
Ceylon
Champlin
Chokio
Clara City
Claremont
Clarissa
Clear Lake
Clearwater
Clinton
Columbia Heights
Comfrey
Comstock
Crosby
Cyrus
Dayton
Deephaven
Deer Creek
Deerwood
Delhi
Donaldson
Donnelly
Doran
Dover
Dundas
Dunnell
Echo
Eden Valley
Edina
Edgerton
Elgin
Ellendale
Ellsworth
Elysian
Erskine
Evansville
Eyota
Fisher
Floodwood
Foley
Forest Lake
Fountain
Foxholme
Franklin
Gary
Geneva
Gibbon
Glenville
Glyndon
Goodhue
Good Thunder
Granada
Grand Marais
Greenbush
Green Isle
Grey Eagle
Grove City
Hancock
Hanley Falls
Hartland
Hayfield
Hendricks
Hendrum
Henning
Hill City
Hills
Hofman
Hokah
Ivanhoe
Jasper
Jeffers
Kellog
Kimball
Lakeville
Lake Wilson
Lester Prairie
Lewiston
Lindstrom
Lowry
Lynd
Madison Lake
Mahnomen
Marietta
Maynard
Mazeppa
Meadowlands
Medford
Melrose
Milan
Montrose
Moose Lake
Morgan
Morristown
Motley
Mount Iron
Murdock
Nashwauk
Nemadji
New Auburn
New London
New York Mills
Nicollet

North Branch
North Mankato
Nymore
Oak Park
Odessa
Ogilvie
Onamia
Osseo
Parker's Prairie
Perley
Peterson
Pierz
Proctor
Raymond
Reading
Richmond
Robbinsdale
Rockford
Roseau
Rosemount
Rothsay
Round Lake
Rushmore
Ruthton
St. Clair
St. Francis
St. Hilaire
St. Joseph
St. Paul Park
St. Vincent
Sacred Heart
Sanborn
Saum
Scanlon
Sebeka
Silver Lake
South Haven
South Stillwater
Spooner
Starbuck
Stewart
Swanville
Taylors Falls
Tenstrike
Tintah
Tower
Triumph
Truman
Twin Valley
Ulen
Verndale
Vernon Center
Villard
Wabasso
Waconia
Walnut Grove
Wanda
Warroad
Watertown
Watson
Waverly
Westbrook
Willow River
Wood Lake
Woodstock
Wolverton
Wrenshall
Wykoff

D. Method

The method of the study, as indicated before, is largely statistical. The historical summary of legislation affecting state aid, which precedes the statistical, is merely a groundwork for the latter. The former, however, describes to us the formal steps by which we have arrived where we are. The latter attempts to clarify the present situation.

The steps taken in the statistical procedure are briefly:

First. The tabulation and summarization of the basic data collected concerning

a. High schools
b. Graded schools
c. Rural schools

This was done in order that clearly defined working *concepts* might be formed concerning each of these groups of schools and the relation of state aid thereto. In the chapters dealing with these respective groups of schools, tables of distribution and central tendencies have been computed in each of the following items:

a. Number of days attended per pupil per year.
b. Cost per pupil day of attendance.
c. State aid per pupil day of attendance.
d. The proportion that state aid is of the annual maintenance income for schools.

e. Local school tax.
f. Assessed valuation per enrolled pupil.
g. Length of the school year in months.

In addition to these items certain other miscellaneous items have been computed in these chapters.

Second. An attempt has been made to discover whether there are any important *relations* between the factors for the separate groups. This is done by the use of distribution tables and correlation coefficients.

Third. The three groups of schools are compared with respect to the above eight common factors. Comparisons are made in terms of distributions and of central tendencies.

Fourth. The method employed in the treatment of special departments is comparable to the one just described. By distributions of salaries and other items of cost, certain facts are established concerning the expenditure for each of these departments. Comparisons are then made between similar items in different departments.

CHAPTER II

HISTORICAL SUMMARY OF LEGISLATION AFFECTING STATE AID

The aim in this chapter is to present a brief historical statement of the facts concerning state aid to public schools in Minnesota. Territorial laws, the state constitution, statutory provisions of the state, and High School Board rulings, are considered as they affect each of the three groups of schools to which state aid is given.

Territorial Provisions

The Organic Act which created the Territory of Minnesota was passed in 1849.[1] This act provided that two sections in each township be reserved as public school land.[2] A territorial act of the same year provided that the county commissioners should levy an annual tax of one-fourth per cent, or two and one-half mills, to be apportioned in proportion to the number of scholars between four and twenty-one years of age in each district.[3] Two years later it was voted that if this tax was insufficient the balance could be raised by levying upon the taxable property of the districts or by a fifty-cent tax on each male inhabitant between twenty-one and fifty-five years of age, as might be directed at the school meeting.[4] In 1854 the apportionment by the county was limited to districts in which school had been taught for at least three months during the year preceding.[5]

State Provisions

I. General Aid or Current School Fund

In 1858 Minnesota was admitted as a state.[6] The constitution provided[7] that the principal of all funds arising from the sale of lands granted for educational purposes should "forever be preserved inviolate and undiminished,"[8] and that the income from the lease or sale of such lands be distributed to the different townships "in proportion to the number of scholars in each township, between the ages of five and twenty-one years."[9]

The general laws of 1861 provided that "the principal sum arising from all sales of school lands shall remain a perpetual school fund in the state

[1] *Minnesota Legislative Manual*, 1911, 11.
[2] *Ibid.*, sec. 18, also Authorizing Act, sec. 5.
[3] *Laws of Minnesota*, 1849 ch. 7, sec. 2.
[4] *Ibid.*, 1851 ch. 29, sec. 16.
[5] *Ibid.*, 1854 ch. 20, sec. 3. A good brief historical account of Minnesota is given in Young, *Civil Government of Minnesota* ch. 2.
[6] *Legislative Manual*, 1911, 62.
[7] *Ibid.*, 25 *et seq.*
[8] *Ibid.*, 45, *State Constitution* art. 8, sec. 2.
[9] *Ibid.*

and shall not be reduced by any charges or costs of officers, by fees or by any means whatsoever."[10]

"All moneys received as interest on such permanent fund, or rents on leased lands, shall constitute the current school fund of the state, and shall be distributed by the state superintendent among the several counties of the state in proportion to the number of scholars therein between the ages of five and twenty-one years."[11]

In 1877 the income from the state school funds was directed to be apportioned among the several counties of the state on the first Mondays of March and October each year in proportion to the number of scholars between five and twenty-one enrolled in schools which had been in session at least three months during the previous year.[12] In 1877 the *county* tax was changed from a two-and-one-half-mills to a one-mill tax which was to be returned to the districts in the same proportion as it had been paid.[13] This provision made the county tax in reality a compulsory part of the local support. In 1887 a *state* one-mill tax was added to the income from the general school fund.[14] The money raised by this tax was to be called the "State School Tax Fund," and this money, together with the income from the general school fund, was to be called the "current school fund."[15]

The same year (1887) the Legislature defined more explicitly the meaning of the word "scholar" which is used in the constitution for the basis of the distribution of the apportionment. Evidently the constitution did not mean to make school population the basis for this distribution. The Legislature therefore directed that all the current fund should be distributed "in proportion to the number of scholars between the ages of five and twenty-one years who have been enrolled and have been in attendance forty days in the public schools."[16] The same statute provided that all schools receiving such funds should be in session not less than five months the year preceding the distribution of the aid.

II. STATE AID TO HIGH SCHOOLS

In 1878 the "High School Board" was created.[17] It consisted of the Superintendent of Public Instruction, the President of the University ex officio, and one member appointed by the Governor.[18] The same act

[10] *General Laws*, 1861 ch. 14, sec. 41.
[11] *Ibid.*, sec. 42.
[12] *Ibid.*, 1877 sec. 1, sub-ch. 5 of ch. 74.
[13] *Ibid.*, sec. 10, sub-ch. 5 of ch. 74.
[14] *Ibid.*, 1887 sec. 3, sub-ch. 5 of ch. 41. (Amending sec. 84 of ch. 36, *General Statutes*, 1878.)
[15] *Ibid.*
[16] *Ibid.*, sec. 1, ch. 41. (Amending sec. 75 of ch. 36, *General Statutes*, 1878.) See also discussion in Kiehle, *Education in Minnesota* ch. 2.
[17] *Ibid.*, 1878 ch. 92, sec. 1.
[18] *Ibid.*

provided special aid of $400 to each high school[19] meeting the following requirements:[20]

"*First*, that there shall be regular and orderly courses of study, embracing all the branches prescribed as prerequisite for admission to the collegiate department of the University of Minnesota, not lower than the third, or sub-freshman class. (Note 1.)[21]

"*Second*, that the said school receiving pecuniary aid under this act, shall at all times permit the said board of commissioners, or any of them, to visit and examine the classes pursuing the same preparatory courses." (Note 2.)

Schools receiving the aid were to admit both sexes free of tuition, but non-residents might be required to pass examination in all subjects required for first grade teacher's certificate except algebra, plane geometry, and the theory and practice of teaching.[22] (Note 3.)

Each school receiving the aid was to be visited by one or more commissioners of the Board at least once annually, or by some competent person appointed by the Board and who was to report to them.[23] The Board was given power "to establish any necessary and suitable rules and regulations relating to examinations, reports, and other proceedings, under this act."[24] (Note 4.) A total of $9,000 was appropriated to cover all the expenses incurred in the administration of the act and the subsidies granted to the high schools for the same purposes.[25]

The next year a total of $20,000 was appropriated.[26]

In 1881[27] the act of 1879 was amended in such a form as to make the appropriation an annual one.[28]

At a special session of the Legislature, held the same year (1881), the High School Board was reorganized.[29] The act provided that "the High School Board shall have full discretionary power to consider and act upon applications of schools for state aid, and to prescribe the conditions upon which said aid shall be granted, and it shall be its duty to accept and aid such schools only as will in its opinion, if aided, efficiently perform the service contemplated by law, but not more than three schools shall be aided in each county in any one year. Any school once accepted and continuing to comply with the law and the regulations of the Board made in pursuance thereof, shall be aided not less than three years."[30] The act

[19] *General Laws*, 1878 ch. 92, sec. 5.
[20] *Ibid.*, sec. 3.
[21] Notes referred to are in Appendix A.
[22] *General Laws*, 1878 sec. 2.
[23] *Ibid.*, sec. 4.
[24] *Ibid.*, sec. 7.
[25] *Ibid.*, sec. 5.
[26] *Ibid.*, 1879 ch. 27, sec. 2.
[27] Since 1879 the legislature has met in regular session in only the odd years, see chapter 23 of *General Laws*, 1878.
[28] *General Laws*, 1881 ch. 144, sec. 5.
[29] *General Laws of Special Sessions*, 1881 ch. 61.
[30] *Ibid.*, sec. 1.

fixed the compensation of an "assistant examiner" but provided that "no compensation shall be paid to any person receiving salary from any state institution."[31] (Notes 5 and 6.)

In 1883 the maximum number of schools that could be aided in one county was increased from three to five,[32] and $3,000 was added to the previous annual appropriation,[33] making a total of $23,000. (Note 7.) This act stood unchanged for four years. (Notes 8, 9, and 10.) In 1887, $2,000 was added to the appropriation,[34] thereby raising the total amount available annually to $25,000. In 1893, $7,000 more was added.[35] (Notes 11, 12, 13, 14.)

Eighteen ninety-seven saw $10,000 added to annual high school aid,[36] making a total of $42,000.

In 1899 the Legislature made more explicit the conditions prerequisite for receiving state aid. In order to receive high school aid the school must have been maintained at least nine months during the year preceding.[37] Students of either sex, residents of any part of the state, must be admitted free of any tuition, and non-residents were admitted only after having satisfactorily passed examinations in all the common branches pursued and completed in the eight grades of the common schools. To receive aid, high schools must have regular and orderly courses of study, embracing all branches prescribed by the State High School Board, as prerequisite for admission to the collegiate department of the State University.[38] Finally, the school must be subject to the rules and regulations prescribed by the High School Board, and be opened to visitation by any member of the Board or the High School Inspector at all times. (Note 15.)

State aid was raised from $400 to $800 for each high school approved for aid.[39] (Note 16.)

To carry into effect the above provisions the Legislature appropriated $85,000 annual aid to high schools.[40] Nine thousand five hundred dollars of the appropriation for high and graded schools was set apart to defray the expenses incurred by the board in inspection and in otherwise administering the act.

The legislature of 1901 raised the aid for each high school to $1,000,[41] and appropriated $15,000 for aid and expenses, the same amount ($9,500) being similarly reserved as in 1899.

[31] *Ibid.*, sec. 2.
[32] *General Laws*, 1883 ch. 40, sec. 1.
[33] *Ibid.*, ch. 151, sec. 1.
[34] *Ibid.*, 1887 ch. 256, sec. 1.
[35] *Ibid.*, 1893 ch. 101, sec. 1.
[36] *Ibid.*, 1897 ch. 155, sec. 6.
[37] *Ibid.*, 1899 ch. 352, art. 2, sec. 7.
[38] *Ibid.*
[39] *Ibid.*, sec. 9.
[40] *Ibid.*, 1899 ch. 352, art. 5, sec. 28.
[41] *Ibid.*, 1901 ch. 189, sec. 1.

In 1903 individual high school aid was raised to $1,500.[42] The appropriation, with the $9,500 reservation as two and four years previous, was $217,000. (Notes 17 to 21.)

In 1905 the High School Board was given *full* discretionary powers to supervise and to prescribe conditions under which aid should be given to high schools, except not more than seven schools in the same county could receive such aid, and aid was to be given any schools not less than two years in succession if regulations were complied with.[43]

In 1909 individual aid was raised to $1,750 per school.[44] In 1909 and 1911 special aids to industrial work were granted. (See section V of this chapter.) Association aid came at the latter date. (Notes 22 to 31.)

III. GRADED SCHOOL AID

Special Aid

The first aid for graded schools was authorized in 1895, to be administered under the supervision of the High School Board.[45] Each school was to receive $200 annually.[46] An appropriation of $10,000 was voted for the purposes of the act.[47] (Notes 32 to 35.)

In 1899, when conditions for receiving high school aid were made more explicit by the legislature, the conditions to be met by graded schools to be entitled to aid were stated by the legislature to be:[48]

1. A school session of at least nine months.
2. A school well organized, with at least four departments in charge of a principal and teachers having the qualifications stipulated by the High School Board. The principal, however, was required to be a graduate of the advanced course of a state normal school, or of the academic or pedagogical department of a reputable college or state university, or have a first grade certificate or a state professional certificate.
3. Suitable buildings, library, and other apparatus necessary for doing efficient work.
4. Regular and orderly courses of study taught, and all branches required by the State High School Board.

Another feature of the law of 1899 provided that no graded school connected with, or in the same district with, a high school receiving state aid, should receive any aid for graded schools.[49]

In 1901 aid was raised to $400 for each school, and the annual appropriation was made $52,000.[50] (Note 36.)

[42] *General Laws*, 1903 ch. 184, sec. 1.
[43] *Ibid.*, 1905 ch. 320, sec. 1.
[44] *Ibid.*, 1909 ch. 334, sec. 1.
[45] *Ibid.*, 1895 ch. 183, sec. 1.
[46] *Ibid.*, sec. 2.
[47] *Ibid.*, sec. 3.
[48] *Ibid.*, 1899 ch. 352, art. 3, sec. 12.
[49] *Ibid.*, sec. 14.
[50] See statement regarding $9,500 expense fund, *General Laws*, 1901 ch. 189, sec. 2, 5.

In 1903 the aid was raised to $550 per school[51] and the appropriation was made $79,000.[52] (Notes 37 to 40.)

In 1909 individual aid was made $600.[53]

In the same year (1909) $500 was authorized for each graded school maintaining a course equivalent to two years of high school work. Such aid was to be paid from the appropriation for high schools and graded schools in as nearly proportionate amounts as might be. (*General Laws*, 1909, ch. 444.) This aid was to be given under the supervision of the High School Board. (Notes 41, 42, and 43.)

Industrial aid of $2,500 per school, granted in 1909, and $1,000 per school, granted in 1911, applied also to graded schools. (See section V of this chapter.) Association aid came at the latter date.

IV. RURAL SCHOOL AID (NOTES 44 AND 45.)

Aid to Semi-graded Schools

In 1899, twenty-one years after the first act granting special aid to high schools, and four years after graded schools had been subsidized, the first special aid was granted to country schools.

These schools that might receive aid were divided into two groups. One group were called semi-graded, and were to receive $100 each from the state annually.[54]

In order to be eligible for such aid a school was obliged to meet all the following requirements:[55]

1. Have an eight months session.
2. Have two departments under teachers of whom one at least should be a graduate of an advanced course of a normal school, or must hold a first grade certificate, or a professional certificate. Other teachers were required to hold a second grade certificate.
3. Have suitable buildings, a library, and necessary apparatus.
4. Have a "regular and orderly" course of study.
5. Comply with the rules of the superintendent of public instruction.
6. Application for aid was to be made by the board to the county superintendent, who was to certify all deserving schools and forward their applications to the state superintendent.[56]

An annual appropriation of $11,000 was made for this aid.[57]

In 1901 the aid was raised to $200 per school[58] and the annual appropriation was made $25,000.[59]

[51] *General Laws*, 1903 ch. 366, sec. 1.
[52] *Ibid.*, 1913 ch. 184, sec. 2.
[53] *Ibid.*, 1909 ch. 334, sec. 1.
[54] *Ibid.*
[55] *Ibid.*, sec. 17.
[56] *Ibid.*, sec. 18.
[57] *Ibid.*, sec. 28, art. 5.
[58] *Ibid.*, 1901 ch. 189, sec. 3.
[59] *Ibid.*, sec. 5.

In 1903 the aid was placed at $250 per school,[60] and the annual appropriation was raised to $67,000.[61]

In 1909 the aid reached $300 per school.[62]

In 1911 association[63] aid came. This is discussed in connection with industrial aid. (See section V of this chapter.)

By chapter 207 of the Laws of 1911 the Legislature allowed consolidation aid. It established three classes of schools to be formed by consolidation. Those of classes A and B were to have an area of at least eighteen sections. Schools of Class C were to be formed with twelve sections. There was to be possible consolidation including an area of less than twelve sections, but in such case the state aid provided would not apply.

Each consolidated school was to be in session for eight months and was to employ a principal who had special training and preparation for directing the teaching of agriculture and other industrial lines. A school of Class A was to provide a building of four rooms or departments and was to receive state aid of $1,500. A school of Class B was to provide a building of three rooms and was to receive aid of $1,000. One of Class C was to be a two-department school and was to receive $750 aid. Additional aid for the erection of a school building for either class to the amount of twenty-five per cent of the cost and not exceeding $1,500 was also provided.

The same year the Legislature provided that "the aggregate attendance in days by children in either class of rural schools shall not be made a rule for granting such aid."[64]

Aid to One-Room Schools

The second class of country schools aided in 1899 were called "rural." They were to receive $75 each per year,[65] and had the same conditions imposed upon them as semi-graded schools had, except that two departments were not required, and the teacher did not need to hold other than a first grade or professional certificate.[66]

Forty thousand dollars annual aid was their appropriation.[67]

In 1901 the aid was made $100 for each such school[68] and the appropriation for such aid, $60,000.[69]

In 1903 aid was made $125 per school,[70] and the appropriation, $100,000.[71]

[60] *General Laws*, 1903 ch. 366, sec. 2.
[61] *Ibid.*, 1903 ch. 184, sec. 2.
[62] *Ibid.*, 1909 ch. 334, sec. 1.
[63] *Ibid.*, 1911 ch. 91, sec. 1.
[64] *Ibid.*, ch. 60, sec. 1.
[65] *Ibid.*, 1899 ch. 352, art. 5, sec. 25.
[66] *Ibid.*, secs. 23, 24.
[67] *Ibid.*, sec. 28.
[68] *Ibid.*, 1901 ch. 189, sec. 4.
[69] *Ibid.*, sec. 5.
[70] *Ibid.*, 1903 ch. 366, sec. 3.
[71] *Ibid.*, 1903 ch. 184, sec. 2.

In 1909 the aid was set at $150 for a rural school fulfilling the conditions above enumerated,[72] and $100 was to be given each school meeting all the requirements except that the teacher held a second grade certificate.[73]

In 1911 a reclassification of rural schools was made. They were divided as follows:[74]

Class A—Schools having sessions of eight months and having teachers with first grade certificates
Class B—Schools having sessions of eight months and having teachers with second grade certificates
Class C—Schools having sessions of seven months and having teachers with second grade certificates

The aid to these schools was set at:[75]

Not more than $150 each for schools in Class A
Not more than $100 each for schools in Class B
Not more than $75 each for schools in Class C

Association aid, explained later, applied to any of these three groups of schools, as did also the proviso excluding "aggregate attendance" as "a rule for granting such aid."

Finally, there was, in 1911, provided a form of aid that can not be called association, consolidation, or transportation aid. Chapter 167 authorized the school board in any district to provide for the instruction of its pupils in an adjoining district by discontinuing its own schools, or for any grade or department in its own schools, and to provide free transportation for the pupils to another school, the school in the district so closed to receive state aid of $150, as provided for schools of Class A under Chapter 60.

V. INDUSTRIAL AID

To Separate Schools

In 1905, the same year that special aid was first voted to graded schools, the Legislature provided for the establishment of country schools of agriculture and domestic economy.[76] The first two schools established and approved by the state superintendent and the dean of the College of Agriculture of the State University were to receive such aid as might be prescribed by law or might be appropriated.[77]

To Separate Departments

There were no country schools established under the act of 1905. In 1909 another plan was passed by the Legislature. It was to be operated

[72] *Ibid.*, 1909 ch. 334, sec. 1.
[73] *Ibid.*
[74] *Ibid.*, 1911 ch. 60, sec. 1.
[75] *Ibid.*
[76] *Ibid.*, 1905 ch. 314, secs. 1-9.
[77] *Ibid.*, sec. 10.

in direct connection with schools already existing.[78] High, graded, and consolidated schools were possible beneficiaries.[79] Each school was to maintain instruction in agriculture, manual training, and home economics.[80] Each school, so aided, was to maintain a demonstration tract of not less than five acres, suitably located.[81] Instruction was to be free to all residents of the state.[82] The course of study was to be made out in full and was to cover all the details of agriculture.[83] The annual aid might equal two thirds of the cost of the department but was not to exceed $2,500 per school.[84] Not more than ten schools were to be so aided the first year, nor more than ten added to the list every two years thereafter,[85] and not more than one school in any county could be added in any two years.[86] Twenty-five thousand dollars was the sum appropriated for each of the next two years.[87] (Notes 46 and 48.)

The next Legislature (1911) provided aid of $1,000 for every high or graded school that would maintain suitable courses in agriculture and in either home economics, *or* manual training.[88] This aid was to be taken from the amounts appropriated for general aid to high and graded schools.[89] (Notes 47 and 48.)

Association aid was granted first by Chapter 82 of the Laws of 1911. Chapter 247 of the Laws of 1909, had, in connection with providing for special industrial departments and special aid for the same, made association permissive. Association is defined in terms of the law as follows:[90]

> SEC. 6. For the purpose of extending the teaching of agriculture, home economics, and manual training to pupils in rural schools, and for the purpose of extending the influence and supervision of state high or graded schools over rural schools, one or more rural schools may become associated with any state high or graded school maintaining a department of agriculture, whether or not such high or graded school has been designated by the state high school board to receive aid under the provisions of this act. Any such state high or graded school shall for the purposes of this act be known as a central school.
>
> SEC. 7. To effect this, proceedings shall be had by petition and election on the part of the rural school, or schools as now provided by law for the consolidation of school districts, and ballots to vote upon this question shall read:
>
> To associate with District No..... for the teaching of agriculture and manual training ..... Yes ..... No ..... The district or districts cast-

[78] *General Laws*, 1909 ch. 247.
[79] *Ibid.*, sec. 1.
[80] *Ibid.*, sec. 2.
[81] *Ibid.*
[82] *Ibid.*, sec. 3.
[83] *Ibid.*
[84] *Ibid.*, sec. 4.
[85] *Ibid.*
[86] *Ibid.*, sec. 5.
[87] *Ibid.*
[88] *Ibid.*, 1911 ch. 91, sec. 1.
[89] *Ibid.*
[90] *Ibid.*, 1909.

ing a majority vote upon the approval of such association by a majority of the school board of the central school become so associated and the rural school or schools together with the central school, shall thereafter be known as the associated schools of . . . . for the teaching of agriculture and manual training.

SEC. 8. The members of the various school boards of the associated schools shall meet on the third Monday in June of each year at the central school building to act as a board of review and to examine into the amount of money expended in each department of work herein provided for and to determine the amount of tax which shall be levied on the associated rural school district or districts for the purpose of maintaining courses of instruction as provided in section 2 of this act, and for the purpose of extending such instruction to the pupils of the associated rural schools. Provided, however, that the tax shall not be less than one mill or more than four mills in the various rural school districts in the association and such tax shall be in addition to other general and special school taxes in such rural districts. The amount of such tax shall be certified by the chairman of the meeting to the county auditor to be by him levied against the property in the respective districts and when collected by the county treasurer, such tax shall be paid to the treasurer of the central school who shall furnish the board of review full and detailed statement of all money received and expended.

SEC. 9. The school board of each rural school district associated with a central school under the provisions of this act shall designate one of its members by vote to act with the school board of the central school in carrying out the provisions of this act as to the teaching of agriculture, domestic economy, and manual training in such schools and in all matters pertaining to such instruction, both in the central school and in the associated rural schools, such member shall have equal power with the member of the school board of the central school.

SEC. 10. The principal or superintendent of the central school shall have and exercise the same authority and supervision over the rural schools as over the central school. He shall prepare for the associated rural schools a suitable course of study embodying training and instruction in agriculture and such subjects as are related to farm life and can be taught successfully in rural schools.

SEC. 11. The relationship and obligations between the associated rural school or schools and the central school may be terminated at any annual school meeting by a majority vote of the associated districts, but not until the central school has had at least one year's notice of the intention to vote on the question.

By Chapter 82 of the Laws of 1911, the above was reënacted with the new provisions that $150 was to be paid to the central school district and $50 to the rural school district for each rural district associating with a central district. Rural districts associating were also permitted to levy a tax for an industrial building in connection with the central district. The minimum tax levy to be imposed on the associated districts was raised to two mills, and the maximum limit of four mills was removed. Permission was granted also for a tract of land for experimental purposes to be acquired in one or more of the associated districts.

In interpreting this provision the state department makes the following statement: "When a school is closed, as provided under chapter 167, and its pupils are transported to another school, the district of the closed school may receive state aid of $150, if the pupils are sent to a school that

earns state aid under Class A, rural schools, or to a semi-graded, graded, or high school. The condition of the closed building is not a factor in earning the aid. The district must, however, provide proper transportation for all its pupils to attend another school."[91]

VI. RULES IN FORCE, 1912-13

The complete rulings of the High School Board relating to state aid which were in force during the year covered by this study are given in Appendix A in form similar to that in which they were published by the State Department of Education.[92]

TABLE IV. OUTLINE OF STATE AID DEVELOPMENT

PART I. CURRENT SCHOOL FUND[93]

YEAR	SOURCES	BASIS OF DISTRIBUTION
1858.....	Annual income from State Public School Funds	Scholars 5 to 21 years of age
1877.....		Scholars, 5 to 21 years of age, attending in schools having at least 3 months session during the year
1887.....	Income from state public school funds and income from a state one-mill tax	Scholars, 5 to 21 years of age, attending at least 40 days, in schools having at least 5 months session during the year

PART II. SPECIAL STATE AID TO PUBLIC SCHOOLS[94]

YEAR	SCHOOLS AND AMOUNTS OF ANNUAL AID					
	High	Graded	Rural			
			"Semi-graded"	"Rural"		
1878.....	$ 400					
1895.....		$200				
1899.....	800		$100	$ 75		
1901.....	1,000	400	200	100		
1903.....	1,500	550	250	125		
				Class A	Class B	
1909.....	1,750	600	300	$150	$100	
				Class A	Class B	Class C
1911.....				$150	$100	$75
1913.....	2,000	750				

[91] Department of Public Instruction, St. Paul, *Circular* no. 7. 1911.

[92] State of Minnesota, *Department of Education Bulletin* no. 45. May, 1913.

[93] For what this has amounted to per pupil as actually distributed, see Appendix C, table 4.

[94] A résumé of only regular lines of work. No aid for departmental work of any kind or for association or consolidation is included.

PART III. AID TO HIGH SCHOOLS

YEAR	ANNUAL AID FOR DIFFERENT PURPOSES				
	High School	Industrial	Association	Consolidation	Remarks
1878...	$ 400				
1881...					Limited to 3 in a county
1883...					Limited to 5 in a county
1899...	800				
1901...	1,000				
1903...	1,500				
1905...					Limited to 7 in a county[86]
1909...	1,750	$2,500			
1911...		2,500 or 1,000	$150 per each associated dist.	$1,500	
1913...	2,000	2,500 or 1,800			

Aid for teacher training departments is in addition to all the above.

PART IV. AID TO GRADED SCHOOLS

YEAR	ANNUAL AID FOR DIFFERENT PURPOSES				
	Graded School	Industrial	Association	Consolidation	H. S. Dept.
1895.....	$200				
1901.....	400				
1903.....	550				
1909.....	600	$2,500			$500
1911.....		2,500 or 1,000	$150 for each associated district	$1,000	
1913.....	750	2,500 or 1,800			

[86] According to the general statutes of both 1905 and 1913 the limit as to number of high schools to receive aid in any one county is seven, although the general laws of 1909 give it as nine. The place where the maximum number was changed from seven to nine can not be found. The general statutes are supposed to be final by court practice.

PART V. RURAL SCHOOL AID

1. "SEMI-GRADED SCHOOLS"

YEAR	ANNUAL AID FOR DIFFERENT PURPOSES		
	Semi-graded Schools	Consolidation	Association
1899	$100		
1901	200		
1903	250		
1909	300	$750	
1911			$150 for each associated district

2. "RURAL SCHOOLS"

YEAR	ANNUAL AID FOR SPECIAL PURPOSES		
	Rural Schools		
1899	$ 75		
1901	100		
1903	125		
	Class A	Class B	
1905	$125	$ 50	
1909	150	100	
	Class A	Class B	Class C
1911	$150	$100	$75

State Appropriations For Public School Aid

Year	High	Graded	Semi-graded	Rural	Normal training	Consolidation	Industrial	Association	Total
1904	212,882[1]	79,750[2]	190,399	76[3]					483,031
1905	1903 Def.* 15,240[4] 208,650[5]	77,700[6]	1903 Def. 2,750[7] 65,780[8]	1903 Def. 15,565[9] 98,361[10]					484,036
1906	1904 Def. 26,425[11] 211,200[12]	75,000[13]	66,744[14]	1904 Def. 4,145[15] 95,835[16]					479,969
1907	1905 Def. 47,993[17] 288,993[18]	1905 Def. 3,700[19] 77,175[20]	1905 Def. 5,760[21] 75,900[22]	1905 Def. 35,148[23] 165,840[24]	8,250[25]				708,959
1908	1906 Def. 71,771[26] 287,435[27]	1906 Def. 3,600[28] 79,040[29]	1906 Def. 10,574[30] 78,200[31]	1906 Def. 64,160[32] 162,305[33]	7,500[34]				764,585
1909	1907 Def. 9,100[35] 1908 Def. 19,577 356,270	1907 Def. 3,675[36] 1908 Def. 4,560 HS 7,500 97,800	1907 Def. 6,600[37] 1908 Def. 6,840 100,800	1907 Def. 6,905[38] 1908 Def. 32,775 236,489	6,000[39]				994,891
1910	360,839[40]	For HS. 16,000[41] 103,800	102,942[42]	240,994[43]	21,000[44]		24,509[45]		870,084
1911	362,250[46]	142,600[47]	144,588[48]	643,598[49]	42,000[50]		24,955[51]		1,359,991
1912	368,887[52]	146,400[53]	130,500[54]	461,410[55]	60,750[56]	64,339[57]	146,915[58]		1,379.201
1913	378,000[59]	130,200[60]	121,700[61]	565,499[62]	29,500[63]	10,035[64]	147,322.68[65]	18,900.00[66]	1,401,156

* "Def." refers to the amount appropriated to cover the deficit for the year indicated.

1 *13th Biennial Report, Incomplete*, 123
2 *Ibid.*
3 *Ibid.*, 139
4 *14th Biennial Report*, 339
5 *Ibid.* 322
6 *Ibid.* 325
7 *Ibid.*, 342
8 *Ibid.*, 329
9 *Ibid.*, 343
10 *Ibid.*, 333, 336
11 *Ibid.*, 340
12 *Ibid.*, 324
13 *Ibid.*, 327
14 *Ibid.*, 331
15 *Ibid.*, 345
16 *Ibid.*, 334, 338
17 *15th Biennial Report*, 258
18 *Ibid.*, 252
19 *Ibid.*, 263
20 *Ibid.*, 259
21 *Ibid.*, 268
22 *Ibid.*, 264
23 *Ibid.*, 277, 282
24 *Ibid.*, 270, 278
25 *Ibid.*, 258
26 *Ibid.*
27 *Ibid.*, 255
28 *Ibid.*, 263
29 *Ibid.*, 260
30 *Ibid.*, 268
31 *Ibid.*, 265
32 *Ibid.*, 277, 282
33 *Ibid.*, 272, 280
34 *Ibid.*, 258
35 *16th Biennial Report*, 256
36 *Ibid.*
37 *Ibid.*
38 *Ibid.*
39 *Ibid.*
40 *Ibid.*
41 *Ibid.*
42 *Ibid.*
43 *Ibid.*
44 *Ibid.*
45 *Ibid.*
46 *17th Biennial Report*, 192
47 *Ibid.*
48 *Ibid.*
49 *Ibid.*
50 *Ibid.*
51 *Ibid.*
52 *Ibid.*
53 *Ibid.*
54 *Ibid.*
55 *Ibid.*
56 *Ibid.*
57 *Ibid.*
58 *Ibid.*
59 *18th Biennial Report*, 27
60 *Ibid.*
61 *Ibid.*
62 *Ibid.*
63 *Ibid.*
64 *Ibid.*
65 *Ibid.*
66 *Ibid.*

CHAPTER III

SPECIAL AID TO HIGH SCHOOLS

As was explained in Chapter II, a specified amount of state aid is given to districts maintaining high schools, for each such school maintained. The districts receiving this aid receive no special aid for that part of the schools below the high school. The money from the state is paid to the district, and in general practice, turned in with the local general school fund. There is no separate account kept of high school costs except by a very few of the larger cities or in some items by other districts. This method of bookkeeping compels us at this point to consider such general items as tax expense and support, for the whole district instead of for the high school department alone. In another chapter[1] certain items are considered for the high school alone, but in this part of the discussion, unless otherwise distinctly specified, "high school district" refers to the whole district or system of schools in the district and not to that division of the system—the high school proper. The whole system includes the high school and the grades. In an associated district it may include, besides the central system with the two parts above named, one or more one-room schools. The number of districts of the last kind, however, is very small.

We realize that this method is not so desirable as it might be. On the other hand, when one stops to consider that the aid is given to the district as the unit, that the common practice is for the district to lump this contribution with all other forms of support in one general source of maintenance, it is clear that the method above indicated, unfortunate and inaccurate as it may be, is the method of procedure really applicable to studying the conditions as they actually exist.

The three largest cities—Duluth, St. Paul, Minneapolis—are not included in this report. They do not represent conditions typical of the state as a whole. These are the only cities of the state that have more than one high school each.[2] Furthermore, in enrollment, in the total number of instructors, in the proportion of the school work that is industrial in character, and in the size of the corporate units in which the high schools of the state are located, the high schools of these three cities are in a group quite separate from the rest of the state. In 1914-15 there were 210 high schools in Minnesota outside of Duluth, St. Paul, and Minneapolis. These were located in villages and cities whose population ranged, according to the United States Census Report of 1910, as shown in Table V.

[1] Chapter 7, Aid to Industrial Departments.

[2] Duluth has 2; St. Paul, 4; Minneapolis, 5. See *Eighteenth Annual Report of the Inspector of State High Schools*, 19 *et seq.*

TABLE V

SIZE OF CORPORATE UNITS IN WHICH MINNESOTA HIGH SCHOOLS ARE LOCATED[3]

5	high	schools	are	in	corporations	of	under	500	people		
71	"	"	"	"	"	"	between	500	and	1,000	people
43	"	"	"	"	"	"	"	1,000	"	1,500	"
30	"	"	"	"	"	"	"	1,500	"	2,000	"
14	"	"	"	"	"	"	"	2,000	"	2,500	"
6	"	"	"	"	"	"	"	2,500	"	3,000	"
5	"	"	"	"	"	"	"	3,000	"	3,500	"
4	"	"	"	"	"	"	"	3,500	"	4,000	"
2	"	"	"	"	"	"	"	4,000	"	4,500	"
3	"	"	"	"	"	"	"	4,500	"	5,000	"
1	"	"	"	"	"	"	"	5,000	"	5,500	"
2	"	"	"	"	"	"	"	5,500	"	6,000	"
2	"	"	"	"	"	"	"	6,000	"	6,500	"
2	"	"	"	"	"	"	"	6,500	"	7,000	"
1	"	"	"	"	"	"	"	7,000	"	7,500	"
3	"	"	"	"	"	"	"	7,500	"	8,000	"
2	"	"	"	"	"	"	"	8,000	"	8,500	"
2	"	"	"	"	"	"	"	8,500	"	9,000	"
0	"	"	"	"	"	"	"	9,000	"	9,500	"
3	"	"	"	"	"	"	"	9,500	"	10,000	"
1	"	"	"	"	"	"	"	10,000	"	10,500	"
1	"	"	"	"	"	"	"	18,000	"	18,500	"

The typical village or city of the state that supports a high school has a population of less than 1,300 people. One half of the high schools are in places containing not over 1,550 people, while 163 or more than three fourths of all the high schools of the state outside of the three largest cities, are in territory that by both the federal authorities and by sociologists is classed as distinctly rural.[4] In attempting to determine and interpret conditions for the state at large the omission of the three largest cities seems, therefore, amply justified.[5]

The median number of days of attendance per pupil per year in 197 high school districts is 147.44. In the middle fifty per cent of these districts, the attendance per pupil is between 142.4 days and 154.9 days.[6]

In ninety-nine per cent of the districts the average attendance is 120 days, or more. This is three times the length of attendance necessary to receive apportionment aid. It is two thirds of a nine-months year. In over ninety per cent of the districts the average attendance is 135 days or more, which is at least three fourths of the standard school year.

[3] See *Thirteenth Census of the United States*, 1910 2:985-8.

[4] Gillette, *Constructive Rural Sociology* ch. 2.

[5] The above data on population were collected for the high schools on the state list in 1914-15. See *Twenty-second Report of State High School Inspector*, 6-10.

[6] In this and in succeeding distributions, the central tendency is obtained by making the basic unit the district, and not the pupil. Considered from one view-point this is not the best method. It does not give an idea that is nearly so correct for the attendance of all the pupils as would be obtained if the computations were made merely on the pupil basis, irrespective of district records. This study, however, is an investigation of certain conditions *by districts as units*. A compilation of attendance merely by pupils would make impossible comparison of this and other items by districts. Such comparisons make up the bulk of this study.

TABLE VI

ATTENDANCE PER PUPIL PER YEAR IN HIGH SCHOOL DISTRICTS[7]

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	ATTENDANCE—DAYS
1	.5	101 to 103.9
1	.5	110 to 112.9
1	.5	120 to 122.9
6	3.04	126 to 128.9
3	1.52	129 to 131.9
6	3.04	132 to 134.9
7	3.55	135 to 137.9
15	7.60	138 to 140.9
17	8.57	141 to 143.9
35	17.76	144 to 146.9
36	18.27	147 to 149.9
20	10.15	150 to 152.9
21	10.65	153 to 155.9
12	6.09	156 to 158.9
11	5.58	159 to 161.9
1	.5	162 to 164.9
3	1.52	165 to 170.9
1	.5	171 to 173.9

TABLE VII

COST PER DAY OF ATTENDANCE PER PUPIL IN HIGH SCHOOL DISTRICTS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	COST PER DAY—CENTS
1	.5	12 to 13.9
5	2.54	14 " 15.9
5	2.54	16 " 17.9
18	9.13	18 " 19.9
25	12.69	20 " 21.9
24	12.18	22 " 23.9
21	10.65	24 " 25.9
26	13.19	26 " 27.9
22	11.16	28 " 29.9
14	7.10	30 " 31.9
11	5.58	32 " 33.9
7	3.55	34 " 35.9
1	.5	36 " 39.9
2	1.01	40 " 43.9
1	.5	44 " 45.9
1	.5	46 " 47.9
1	.5	48 " 51.9
1	.5	52 " 57.9
1	.5	58 " 59.9
1	.5	60 " 61.9
1	.5	62 " 63.9
1	.5	64 " 65.9
3	1.52	68 " 69.9
2	1.01	94 " 95.9
1	.5	126 " 127.9
1	.5	136 " 137.9

[7] It should be remembered that data collected made it possible to use 197 high school districts in the basic computations. These districts are the ones covered by the following tables of this chapter.

The median cost per day of attendance per pupil is 25.66 cents. For the middle one half of the districts this cost is between 21.5 cents and 29.87 cents. Although this unit cost reaches $1.36 in the case of one district, over ninety per cent of the districts have a corresponding cost of not more than 35 cents. About fifteen per cent have a unit cost of less than 20 cents. Thus seventy-five per cent of the districts have a unit cost of between 20 and 35 cents per day of attendance.

TABLE VIII

AID PER DAY OF ATTENDANCE

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	AID PER DAY—CENTS
6	3.0	3 to 3.9
13	6.6	4 " 4.9
23	11.7	5 " 5.9
33	16.8	6 " 6.9
31	15.7	7 " 7.9
28	14.2	8 " 8.9
15	7.6	9 " 9.9
22	11.2	10 " 10.9
10	5.1	11 " 11.9
5	2.5	12 " 12.9
3	1.5	13 " 13.9
2	1.0	14 " 14.9
1	.5	15 " 15.9
3	1.5	16 " 16.9
0	.0	17 " 17.9
0	.0	18 " 18.9
1	.5	19 " 19.9
1	.5	20 " 20.9

TABLE IX

LOCAL SCHOOL TAX IN MILLS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	LOCAL SCHOOL TAX—MILLS
6	3.04	2 to 2.9
19	7.64	3 " 3.9
38	19.38	4 " 4.9
41	20.81	5 " 5.9
40	20.30	6 " 6.9
26	13.19	7 " 7.9
7	3.55	8 " 8.9
4	2.03	9 " 9.9
7	3.55	10 " 10.9
3	1.52	11 " 11.9
4	2.03	12 " 12.9
1	.5	17 " 17.9
1	.5	18 " 18.9

The median aid per day of attendance is 7.5 cents. There are some scattered cases of very high aid per day. In the middle half of the districts the aid ranges from 6.1 cents to 9.8 cents per day. Although the aid is as much as 20 cents per day in one district, it is 12 cents or more in only five and one-half per cent of all the schools. It is under 5 cents in less than ten per cent of all. In about eighty-five per cent of the schools, then, the aid ranges from 5 to 13 cents per pupil per day of attendance.

The median special tax that these districts levy for school maintenance, computed on their total taxable valuation, is 6.26 mills. The middle half of the districts levy taxes between 5.03 mills and 7.81 mills. Although one district has a tax of more than 17.9 mills, only eight per cent have taxes of 10 mills or more, while the taxes of eleven per cent are less than 4 mills. Thus about eighty-eight per cent of all districts are taxed between 4 and 10 mills on the basis of their true valuation.

Comparisons of Local Special School Tax Levies

The report of the Minnesota Tax Commission for 1912 contains a careful study of the ratio between the taxable and true valuation of property throughout the state.[8] This report gives the ratio of taxable to true valuation for each separate county of the state. The median of this ratio is 32.49 per cent.

In attempting a comparison of local special school taxes levied on the assessed valuation of the district, and any other item based upon or in any way dependent upon these items, one would be entirely in error to compare assessed valuations as they are stated, since the ratio of taxable to true valuation in the several counties of Minnesota ranges, as the above cited table shows, from 22.55 per cent to 43.35 per cent. The plan adopted in this study, therefore, was to reduce all special local school mill tax levies to the basis of the tax rate on the true valuation of the same property, the true valuation being computed by the use of the ratio of taxable to true valuation for the county in which such districts are located. It may be objected that rural real estate is not assessed the same as urban. This, however, can not constitute real criticism of the method at this point. Facts brought out in a later part of the study show clearly that the amount of mill tax voted for school purposes is considerably lower among rural districts than among districts maintaining graded or high schools, but that the assessed valuation to be drawn on for every pupil enrolled in school is considerably higher in the open country districts than in villages and cities.[9] If absolutely accurate figures were obtainable, there is no doubt that figures for the true valuation of rural real estate would be slightly

[8] Table 1, pp. 430, 431.
[9] Chapter 6, Summary.

raised. The figures for the true valuation of urban real estate on the other hand, might be slightly lowered. Change in either place indicated would affect results only in an increase in the same direction which the present indications show. All the facts we have on hand tend to prove that if more accurate information in this particular respect were available, comparisons in items of financial ability and taxable effort and resources between rural and graded and high schools would be even more striking than the obtained comparisons show.

The actual ratios of the taxable to true valuation in the fourteen counties used for rural school computations are:[10]

County	Ratio of Taxable to True Valuation Per Cent	County	Ratio of Taxable to True Valuation Per Cent
Carlton	30.09	Meeker	26.57
Dodge	30.59	Norman	30.64
Douglas	25.14	Pipestone	25.87
Fillmore	26.80	St. Louis	36.90
Hubbard	28.56	Scott	22.77
Isanti	30.53	Watonwan	27.73
Kittson	25.36	Wilkin	27.03

In the above table and in all others in this study where the amount of local school tax enters, *tax on real valuation* as above explained will be meant unless specific statement is made to the contrary.

TABLE X

The Per Cent That State Aid Is of the Annual Maintenance Income in High School Districts

Number of Districts	Per Cent of All Districts	State Aid—Per Cent
5	2.54	3 to 5.9
4	2.03	6 " 8.9
3	1.52	9 " 11.9
2	1.01	12 " 14.9
5	2.54	15 " 17.9
9	4.54	18 " 20.9
14	7.10	21 " 23.9
16	8.07	24 " 26.9
18	9.13	27 " 29.9
30	15.22	30 " 32.9
24	12.18	33 " 35.9
28	14.21	36 " 38.9
13	6.59	39 " 41.9
11	5.58	42 " 44.9
5	2.54	45 " 47.9
5	2.54	48 " 50.9
3	1.52	51 " 56.9
1	.5	57 " 59.9
1	.5	60 " 62.9

[10] *Report of the Minnesota Tax Commission*, 1912 table 1, pp. 430, 431.

The median part that the total state aid is of the whole maintenance income of the districts is 32.15 per cent. The middle half of the districts receive from the state between 25.26 per cent and 37.76 per cent of their maintenance.

One district receives from the state as much as 60 per cent of its maintenance, while between eight and nine per cent of all the schools receive less than 15 per cent. On the other hand, more than forty-six per cent receive in aid over one third of their annual maintenance, and about eighty per cent receive more than one fourth.

TABLE XI

ASSESSED VALUATION PER ENROLLED PUPIL

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	ASSESSED VALUATION PER PUPIL
2	.96	$ 250 to $ 499
19	9.17	500 " 749
41	19.32	750 " 999
55	26.56	1,000 " 1,249
29	15.00	1,250 " 1,499
21	10.14	1,500 " 1,749
9	4.34	1,750 " 1,999
6	2.89	2,000 " 2,249
6	2.89	2,250 " 2,499
2	.96	2,500 " 2,749
1	.48	2,750 " 2,999
2	.96	3,000 " 3,499
1	.48	3,500 " 3,999
1	.48	4,000 " 4,139
1	.48	4,250 " 4,499
1	.48	4,500 " 5,749
1	.48	5,750 " 7,999
1	.48	8,000 " 8,499
1	.48	8,500 " 8,749
1	.48	8,750 " 10,499
1	.48	10,500 " 16,749
1	.48	16,750 " 18,249
1	.48	18,250 " 18,749
1	.48	18,750 " 23,999
1	.48	23,000 " 53,749
1	.48	53,750 " 53,799

The median assessed valuation per enrolled pupil is $1,186. In the middle fifty per cent of these districts such valuation is between $937 and $1,610 per pupil.

The median and the mode fall in the same group. The distribution is extremely skewed toward low valuation. This is what we might expect. The highest valuations occur in those districts located in the northern part of the state. Several of the districts in this portion are almost or altogether iron mine territory.

Over eighty per cent of the districts have a valuation per pupil of less than $1,750. The lowest fifty districts have a valuation between $250

and $677 per enrolled pupil. The highest fifty range from $1,631 to $53,750 per pupil. The valuations per pupil in the five richest districts are, respectively:

$16,964
$18,390
$18,790
$23,093
$53,752

In over ninety-five per cent of the districts a fifteen-mill tax[11] levied on the assessed valuation would bring between $7.50 and $37.50 per pupil. In over nine per cent of the districts the same levy would bring between $38.00 and $800.00 per pupil.[12]

It should be remembered that all the figures discussed in connection with the above table are on the basis of assessed and not real valuation.

Effect of Special State Aid on Enrollment in High School

It is possible that one effect of special state aid to high schools has been to increase attendance from outside the district itself, to attract children from adjoining districts. The presence of a high school in a well-settled community means that it will attract from nearby districts a part of its enrollment. This fact is shown in a later part of the study.[13] In so far as special aid has furthered the establishment of high school departments, it has doubtless been a positive factor in increasing the enrollment of pupils from outside the district.

But aid to individual high schools increased from a maximum of $1,500 plus the apportionment in 1903,[14] to a maximum possibility of over $5,000 in addition to apportionment in 1914-15.[15] Later we shall discover that the per cent of outside enrollment in all the high schools of the state was 23.3 per cent in 1903 and 23.4 per cent in 1915.

The question more to the point is whether the increase in special state aid per school increased the enrollment of pupils from outside the district in similar proportion. An examination of the per cent of outside enrollment in the high schools during the past decade compels us to give a negative answer.

Some may object that the above presentation omits one very important item, that of consolidation; that the pupils from the outlying territory in consolidated districts are as truly "outside" pupils in the sense the above

[11] A rough central measure of special school levies among high school districts of the state.
[12] Cf. Cubberley, *School Funds and Their Apportionment* chs. 3 and 4.
[13] Chapter 7, table 76.
[14] Chapter 2.
[15] *Eighteenth Annual Report of Inspector of State High Schools*, 4. No decrease was made after 1911, but an increase to one group of industrial schools and to teacher training departments. See Chapter 2.

are considered as though they were not within the formal confines of the enlarged district. It should be remembered that districts receive special annual aid for consolidation in addition to aid received because they support accredited high schools. It is quite erroneous to confuse these two forms of aid or the effects of them.

There is this much to be considered however. Every high school receives some of its pupils from outside its district. By consolidation a district takes in as its own members a number of pupils previously enrolled as outsiders. The number of such pupils included will depend partly upon the amount of rural territory included in the consolidation. In any consolidated district then, the number of outsiders enrolled will be nominally less than before the consolidation. The number of consolidated schools has increased markedly during the past five years. This situation makes the per cent of outside enrollment seem somewhat less for this period than it actually has been.

High School Enrollment and High School Expense

Is there any relation between the part of a district's enrollment that is in the high school and the part of the district's money spent in the high school? If there is a central tendency for, say, one fourth of all pupils in high school districts to be found in the high school department, is there a corresponding tendency for one fourth, one third, or any other fraction of expenditure to go to the high school department?

For eighty-five districts receiving no aid for industrial work, division of school enrollment and cost between the grades and the high school is as shown in the two following tables:

TABLE XII

Per Cent of a District's Total Annual Enrollment That Is in the High School

Number of Districts	Per Cent of All Districts	High School Enrollment—Per Cent
6	7.07	3 to 7.9
6	7.07	8 " 12.9
12	14.12	13 " 17.9
27	31.75	18 " 22.9
22	25.87	23 " 27.9
10	11.76	28 " 32.9
1	1.18	33 " 37.9
0	.0	38 " 42.9
0	.0	43 " 47.9
1	1.18	48 " 52.9
0	.0	53 " 57.9
0	.0	58 " 62.9

TABLE XIII

PER CENT OF A DISTRICT'S TOTAL ANNUAL COST THAT IS DEVOTED TO THE HIGH SCHOOL

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	HIGH SCHOOL COST—PER CENT
4	4.72	3 to 7.9
3	3.53	8 " 12.9
7	8.24	13 " 17.9
12	14.12	18 " 22.9
19	22.35	23 " 27.9
14	16.47	28 " 32.9
11	12.93	33 " 37.9
7	8.24	38 " 42.9
2	2.36	43 " 47.9
4	4.71	48 " 52.9
1	1.18	53 " 57.9
1	1.18	58 " 62.9

The relation between high school expenditure and enrollment is shown more clearly by changing Tables XII and XIII into curves of distribution. Figure 1 is the result.

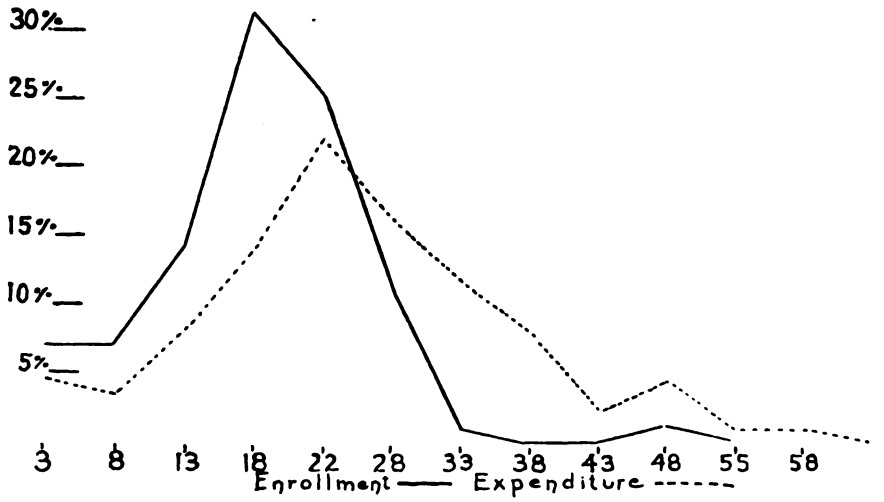


Figure 1

Per cent of district's total expenditure and enrollment in the high school department

Both tables and the figure indicate that there is a well-marked central tendency in each item. Districts maintaining high school departments have a median of 20 per cent of their total enrollment in the high school, and to maintain this department, spend slightly more than 30 per cent of their total annual expenditure to maintain all their school. The middle fifty per cent of the districts enroll between 16 per cent and 25 per cent

of all their children in their high schools. While one district enrolls "48 per cent to 52.9 per cent," only slightly more than two per cent of all districts enroll in their high schools over 38 per cent of their total enrollment. The limits of the middle half of the districts in expenditure fall both higher and lower than in enrollment. They are 21 per cent and 35 per cent for expenditure as compared with 16 per cent and 25 per cent for enrollment. One school spends on its high school "58 per cent to 62.9 per cent" of what it spends for all its schools each year. Yet less than one fifth of all spend more than 33 per cent of their money in their high school departments and about one sixth spend less than 18 per cent.

Table XIV shows a marked positive correlation between per cent of enrollment in the high school and the money spent in that department, in these eighty-five districts.

It is valuable to know how Minnesota compares in these items with other sections of the country.

TABLE XIV

PER CENT OF A DISTRICT'S TOTAL ENROLLMENT AND ANNUAL COST TO BE FOUND IN THE HIGH SCHOOLS

ENROLLMENT	PER CENT OF COST											
	3–7.9	8–12.9	13–17.9	18–22.9	23–27.9	28–32.9	33–37.9	38–42.9	43–47.9	48–52.9	53–57.9	58–62.9
3 to 7.9	4	2										
8–12.9		1	3	1	1							
13–17.9			2	3	2	1	2			1	1	
18–22.9			2	4	11	6	3	1				
23–27.9				3	5	5	3	6				
28–32.9				1		2	2		2	2		1
33–37.9										1		
38–42.9												
43–47.9												
48–52.9							1					
53–57.9												
58–62.9												
TOTALS	4	3	7	12	19	14	11	7	2	4	1	1
MEDIANS	5.5	6.3	13.3	20.5	20.5	23.	23.8	25.1	30.5	30.5	15.5	30.5

The Boise, Idaho, Survey[16] shows that in thirty-seven cities of the United States the lowest per cent of expenditure devoted to high schools is 10 per cent and the highest is 36 per cent.[17] Only seven of the thirty-seven spend over 30 per cent, the Minnesota median, in the department. Their mode is clearly marked at 21 per cent. Sixty-nine per cent of these eighty-five schools are above the group in which this figure falls. On the whole, the eighty-five high schools of Minnesota compare favorably with

[16] *Expert Survey of Public School System, Boise, Idaho,* 1912.
[17] *Ibid.,* 18.

the high schools of the thirty-seven cities. The variability, though, is considerably greater than that found among these cities. The distribution of expenditure for high schools among these cities is:

TABLE XV

PER CENT OF SCHOOL EXPENDITURE DEVOTED TO HIGH SCHOOL IN THIRTY-SEVEN CITIES

PER CENT OF EXPENDITURE	NUMBER OF CITIES
10 per cent to 14.9 per cent	3
15 per cent to 19.9 per cent	9
20 per cent to 24.9 per cent	16
25 per cent to 29.9 per cent	2
30 per cent to 34.9 per cent	5
35 per cent to 39.9 per cent	2

This survey gives the per cent of children in the high school in these thirty-seven cities, not by enrollment but by average daily attendance.[18]

The distribution of the total daily attendance in these cities that is to be found in their high schools is given in Table XVI.

TABLE XVI

PER CENT OF TOTAL AVERAGE DAILY ATTENDANCE TO BE FOUND IN HIGH SCHOOLS IN THIRTY-SEVEN CITIES

PER CENT OF ATTENDANCE	NUMBER OF CITIES
5 per cent to 9.9 per cent	7
10 per cent to 14.9 per cent	22
15 per cent to 19.9 per cent	5
20 per cent to 24.9 per cent	2
25 per cent to 29.9 per cent	0
30 per cent to 34.9 per cent	1

In the "10 per cent to 14.9 per cent" group, there are

6 schools at 10 per cent
4 schools at 11 per cent
6 schools at 12 per cent
3 schools at 13 per cent
3 schools at 14 per cent

The modal per cent of attendance in high school among these cities is between 10 and 15 per cent. In Minnesota the median per cent of enrollment in high school is 20. Of the thirty-seven cities only three have more than 20 per cent of their average daily attendance in the high school.

Making all due allowance for the fact that presence of pupils is measured by average daily attendance in one group of schools and by enrollment in the other group, Minnesota's high schools rank high. It is very clear also that the districts maintaining high schools in this state are well disposed in the matter of supporting their high school departments. Whether the support is justly divided between the high school and the elementary school is a question which it is impossible to answer from any data at present available.

[18] *Ibid.*, 19.

TABLE XVII

RELATION OF PER CENT OF AID RECEIVED TO COST PER PUPIL DAY OF ATTENDANCE

COST	PER CENT OF AID																	
	3–3.9	4–4.9	5–5.9	6–6.9	7–7.9	8–8.9	9–9.9	10–10.9	11–11.9	12–12.9	13–13.9	14–14.9	15–15.9	16–16.9	17–17.9	18–18.9	19–19.9	20–20.9
12–13.9			1															
14–15.9			3		2													
16–17.9			1	1	2	1												
18–19.9	1	1	3	6	5	1	1											
20–21.9	1		5	8	5	4		2										
22–23.9	1	3	3	4	3	5	2	2			1							
24–25.9		2	2	3	3	6	1	3	1									
26–27.9		1	1	4	3	6	2	4	2	2		1						
28–29.9			1	3	3	2	3	5	3	1	1							
30–31.9			2	1		2	3	1	3	1				1				
32–33.9		1			3	1	1	3		1				1				
34–35.9					1		1	2	1			1				1		
36–37.9											1							
38–39.9																		
40–41.9	1						1											
42–43.9																		
44–45.9														1				
46–47.9					1													
48–49.9	1																	
50–51.9																		
52–53.9				1														
54–55.9																		
56–57.9																		
58–59.9		1																
60–61.9				1														
62–63.9																		1
64–65.9		1																
68–69.9	1	1											1					
94–95.9		2																
126–127.9			1															
136–137.9				1														
TOTALS	6	13	23	33	31	28	15	22	10	5	3	2	1	3		1		1
MEDIANS	32.0	27.0	21.4	22.7	22.8	25.0	28.8	28.0	29.3	29.0	29.0	31.0	65.0	33.0		35.0		63.0

TABLE XVIII

Relation between Local Tax Levy and Per Cent of Annual Income Derived from the State

Per Cent of Aid	Tax Rate																
	2- 2.9	3- 3.9	4- 4.9	5- 5.9	6- 6.9	7- 7.9	8- 8.9	9- 9.9	10-10.9	11-11.9	12-12.9	13-13.9	14-14.9	15-15.9	16-16.9	17-17.9	18-18.9
3- 5.9	1	1	2		1												
6- 8.9	2		1			1											
9-11.9			1			1		1									
12-14.9		1			1												
15-17.9		2	1			1					1						
18-20.9	1	1	4			1			1							1	
21-23.9		1		4	3	1	1	1	1	1	1						
24-26.9		2	3	2	3	2	1		1		1						1
27-29.9			4	1	4	6	2	1									
30-32.9	1		7	8	7	4	1		1	1							
33-35.9	1	1	6	8	6	2											
36-38.9		2	3	8	5	6	1	1	1		1						
39-41.9		4	2	3	3	1											
42-44.9			3	4	3				1								
45-47.9		3		2													
48-50.9				1	2				1	1							
51-53.9			1		1		1										
54-56.9																	
57-59.9					1												
60-62.9		1															
Totals	6	18	38	41	40	26	7	4	7	3	4					1	1
Medians	13.0	36.7	31.3	35.1	33.5	30.0	28.5	25.5	31.5	31.5	24.0					19.5	25.5

TABLE XVII

Relation of Per Cent of Aid Received to Cost per Pupil Day of Attendance

Cost	Per Cent of Aid																	
	3– 3.9	4– 4.9	5– 5.9	6– 6.9	7– 7.9	8– 8.9	9– 9.9	10–10.9	11–11.9	12–12.9	13–13.9	14–14.9	15–15.9	16–16.9	17–17.9	18–18.9	19–19.9	20–20.9
12– 13.9			1															
14– 15.9			3		2													
16– 17.9			1	1	2	1												
18– 19.9	1	1	3	6	5	1	1											
20– 21.9	1		5	8	5	4		2										
22– 23.9	1	3	3	4	3	5	2	2			1							
24– 25.9		2	2	3	3	6	1	3	1									
26– 27.9		1	1	4	3	6	2	4	2	2		1						
28– 29.9			1	3	3	2	3	5	3	1	1							
30– 31.9			2	1		2	3	1	3	1				1				
32– 33.9		1			3	1	1	3		1				1				
34– 35.9					1		1	2	1			1				1		
36– 37.9											1							
38– 39.9																		
40– 41.9	1						1											
42– 43.9																		
44– 45.9														1				
46– 47.9					1													
48– 49.9	1																	
50– 51.9																		
52– 53.9				1														
54– 55.9																		
56– 57.9																		
58– 59.9		1																
60– 61.9				1														
62– 63.9																		1
64– 65.9		1																
68– 69.9	1	1											1					
94– 95.9		2																
126–127.9			1															
136–137.9				1														
Totals	6	13	23	33	31	28	15	22	10	5	3	2	1	3		1		1
Medians	32.0	27.0	21.4	22.7	22.8	25.0	28.8	28.0	29.3	29.0	29.0	31.0	65.0	33.0		35.0		63.0

TABLE XVIII

Relation between Local Tax Levy and Per Cent of Annual Income Derived from the State

Per Cent of Aid	Tax Rate																
	2–2.9	3–3.9	4–4.9	5–5.9	6–6.9	7–7.9	8–8.9	9–9.9	10–10.9	11–11.9	12–12.9	13–13.9	14–14.9	15–15.9	16–16.9	17–17.9	18–18.9
3– 5.9	1	1	2		1												
6– 8.9	2		1			1											
9–11.9			1			1		1									
12–14.9		1			1												
15–17.9		2	1			1					1						
18–20.9	1	1	4			1			1							1	
21–23.9		1		4	3	1	1	1	1	1	1						
24–26.9		2	3	2	3	2	1		1		1						1
27–29.9			4	1	4	6	2	1									
30–32.9	1		7	8	7	4	1		1	1							
33–35.9	1	1	6	8	6	2											
36–38.9		2	3	8	5	6	1	1	1		1						
39–41.9		4	2	3	3	1											
42–44.9			3	4	3				1								
45–47.9		3		2													
48–50.9				1	2				1	1							
51–53.9			1		1		1										
54–56.9																	
57–59.9					1												
60–62.9		1															
Totals	6	18	38	41	40	26	7	4	7	3	4					1	1
Medians	13.0	36.7	31.3	35.1	33.5	30.0	28.5	25.5	31.5	31.5	24.0					19.5	25.5

TABLE XIX

Relation between Local Tax Rate and Number of Days Attended per Pupil

Attendance	Tax Rate																
	2– 2.9	3– 3.9	4– 4.9	5– 5.9	6– 6.9	7– 7.9	8– 8.9	9– 9.9	10–10.9	11–11.9	12–12.9	13–13.9	14–14.9	15–15.9	16–16.9	17–17.9	18–18.9
100–109.9										1							
110–119.9			1														
120–129.9	1		1	1	2			1	1	1							
130–139.9		2	5	9	2	4	1		2								
140–149.9	1	6	13	23	20	15	4	2	2	1	4					1	1
150–159.9	2	7	12	8	16	7	2		2								
160–169.9	2	4	6														
170–179.9								1									
Totals	6	19	38	41	40	26	7	4	7	3	4					1	1
Medians	155	142	149	145	147	146	146	145	142	125	145					145	145

TABLE XX

RELATION BETWEEN NUMBER OF DAYS ATTENDED PER PUPIL AND AID PER DAY OF ATTENDANCE PER PUPIL

ATTENDANCE	PER CENT OF AID																			
	3– 5.9	6– 8.9	9–11.9	12–14.9	15–17.9	18–20.9	21–23.9	24–26.9	27–29.9	30–32.9	33–35.9	36–38.9	39–41.9	42–44.9	45–47.9	48–50.9	51–53.9	54–56.9	57–59.9	60–62.9
100–109.9											1					1				
110–119.9	1						1		1	2		1		1					1	
120–129.9			1			1		2	4	4	2	3	3	3		1		1		
130–139.9	1	1		1	1	5	9	10	7	12	13	18	6	4	2	2		1		
140–149.9	3	1	1	1	3	2	3	3	5	12	7	3	4	2	3	1		1		1
150–159.9		2			1	1	1	1	1		1	3		1						
160–169.9			1																	
170–179.9																				
TOTALS	5	4	3	2	5	9	14	16	18	30	24	28	13	11	5	5		3	1	1
MEDIANS	142	160	155	150	155	146	147	147	146	147	146	146	146	144	152	142		145	125	155

TABLE XXI

Relation between Population and Local Tax Rate

Population	Tax in Mills on True Valuation														
	2– 2.9	3– 3.9	4– 4.9	5– 5.9	6– 6.9	7– 7.9	8– 8.9	9– 9.9	10–10.9	11–11.9	12–12.9	13–13.9	14–14.9	17–17.9	18–18.9
0– 999		5	7	19	17	10	2		5	3	2				1
1,000– 1,999	2	6	14	15	14	11	5	3	1						
2,000– 2,999		1	4	4	5	1			1		2			1	
3,000– 3,999	1		5		1	1		1							
4,000– 4,999			4			1									
5,000– 5,999			2		1										
6,000– 6,999			1	2											
7,000– 7,999	2	2			1										
8,000– 8,999						2									
9,000– 9,999		2													
10,000–10,999	1	2	1												
18,000–18,999		1													
Totals	6	19	38	40	39	26	7	4	7	3	4			1	1
Medians*	55	13.7	14.4	10.3	11.1	11.2	11.5	11.8	5.3	6.0	15			25	5

* Medians are expressed in measures of a hundred in this table and the three immediately following.

TABLE XXII

Relation between Population and Expense per Day of Attendance

Population	Expense per Day of Attendance														
	10–14.9	15–19.9	20–24.9	25–29.9	30–34.9	35–39.9	40–44.9	45–49.9	50–54.9	55–59.9	60–64.9	65–69.9	90–94.9	125–129.9	135–139.9
0– 999		6	21	24	17		1				1	1			
1,000– 1,999	2	12	23	20	7		1		1		1	1	1	1	1
2,000– 2,999		2	3	7	4	1		1			1				
3,000– 3,999		1	5	1	1		1								
4,000– 4,999		1	3		1										
5,000– 5,999			2	1											
6,000– 6,999		1	1	1											
7,000– 7,999		1	1	1				1					1		
8,000– 8,999		1								1					
9,000– 9,999			2												
10,000–10,999			2		1							1			
18,000–18,999			1												
Totals	2	25	64	55	31	1	3	2	1	1	3	3	2	1	1
Medians	5	12.4	14.8	11.5	9.0	25.	12.5	50.0	15.0	85.0	15.	15.	45.	15.	15.

TABLE XXIII

RELATION BETWEEN POPULATION AND PER CENT OF ANNUAL INCOME DERIVED FROM THE STATE

POPULATION	PER CENT OF INCOME RECEIVED FROM THE STATE																			
	3– 5.9	6– 8.9	9–11.9	12–14.9	15–17.9	18–20.9	21–23.9	24–26.9	27–29.9	30–32.9	33–35.9	36–38.9	39–41.9	42–44.9	45–47.9	48–50.9	51–53.9	54–56.9	57–59.9	60–62.9
0– 999							3	2	7	13	7	14	6	9	3	3	2		1	1
1,000– 1,999	3	2	1				5	5	5	12	12	13	6	2	2	2	1			
2,000– 2,999			1		1	4	1	4	2	3	2	1								
3,000– 3,999			1				1	1	3	1	2									
4,000– 4,999					2	1			1		1									
5,000– 5,999						1	1	1												
6,000– 6,999							2			1										
7,000– 7,999	1	1		1			1	1												
8,000– 8,999		1				1														
9,000– 9,999						1		1												
10,000–10,999	1			1	1	1														
18,000–18,999					1															
TOTALS	5	4	3	2	5	9	14	15	18	30	24	28	12	11	5	5	3		1	1
MEDIANS	18	45	25	80	47.5	45	18	20	14	11.7	14.2	10	10	15.5	8	8	5		5	5

TABLE XXIV

Relation between Population and Aid in Cents per Day of Attendance

Population	Aid in Cents per Day of Attendance																
	3–3.9	4–4.9	5–5.9	6–6.9	7–7.9	8–8.9	9–9.9	10–10.9	11–11.9	12–12.9	13–13.9	14–14.9	15–15.9	16–16.9	17–17.9	18–18.9	19–19.9	20–20.9
0– 999				2	11	15	13	9	8	5	2	2	1	3			1	1
1,000– 1,999		3	5	22	13	10	2	12	2									
2,000– 2,999			5	4	5	3		1			1							
3,000– 3,999	1		4	2	2													
4,000– 4,999		2	1	2														
5,000– 5,999		1	1	1														
6,000– 6,999			3															
7,000– 7,999	1	2	2															
8,000– 8,999	1	1																
9,000– 9,999		1	1															
10,000–10,999	2	2																
18,000–18,999	1																	
Totals	6	12	22	33	31	28	15	22	10	5	3	2	1	3			1	1
Medians	95	65	32.5	16.5	14.2	9.3	5.8	11.7	6.2	5	7.5	5	5	5			5	5

Each of the preceding eight tables shows the relationship between two factors already considered in the discussion of high schools.

No correlation of amounts large enough to be significant appears in any of these tables of distribution.

TABLE XXV

HIGH SCHOOL SUMMARY

ITEM	MEDIAN	QUARTILES	
Annual attendance per pupil	147.4 days	142.4 days	154.4 days
Cost per pupil day	25.7 cents	21.5 cents	29.9 cents
Aid per pupil day	7.5 cents	6.1 cents	9.8 cents
Per cent of state aid	32.2 per cent	25.3 per cent	37.8 per cent
Local tax levy	6.3 mills	5.0 mills	7.8 mills
Assessed valuation per pupil	$1,186	$937	$1,610
Length of school year	9 months[19]		

SUMMARY

The typical Minnesota high school system is located in a village of between 1,250 and 1,275 people. Its pupils attend 147 days each year, and each pupil costs his district twenty-seven cents each day he attends. The district receives from the state seven and five-tenths cents for each pupil for each day he attends, and thirty-two per cent of all the annual income provided for maintaining the school system. The district, to raise its share, levies a tax of six mills on its real valuation. The assessed valuation of the property amounts to $1,186 for every child enrolled in the district. The variability among the different high school districts is such that statements of central tendencies concerning taxes and per cent of aid are somewhat misleading. There is a marked tendency for districts to put money into their high schools in direct proportion to the number enrolled in the high schools. There is no tendency, as is sometimes asserted, for some communities to support a high school "at the expense of the grades."

In the lowest twenty-one per cent of high school districts the average levy for all high school districts would bring between $3.75 and $11.25 per enrolled pupil. In the nineteen highest a similar tax would bring $37.50 to $800 per pupil. In the six districts of highest valuation the same levy would raise from $254 to $800 per pupil. And yet there is no distinction made by the state in distributing the aid because of this extremely high variability.

[19] The modal length. It is the minimum and is exceeded by a negligible number of the 197 schools.

What is the object of state aid to high schools? The original question in this connection seemed to be whether it is not as legitimate for the state to assist high schools by a direct bonus as to assist elementary schools, normal schools, and universities,[20] or whether the state is not bound to give such assistance in order to make its policy consistent for all divisions of public education.

But more specific aims have been attempted in applying such aid. In Massachusetts "the inference is that state aid is offered as an inducement to employ more than one teacher."[21] In Maine the result was to increase greatly the number of free high schools, to raise very materially the standards of secondary scholarship, and to increase the number of courses offered by high schools.[22] The original aim "in Wisconsin was to encourage the development of township or rural high schools." The results have been more far reaching in greatly broadening the curriculum, maintaining high standards of teachers' qualifications.[23] In California the aid "has helped struggling country schools where some of the very best secondary work is being done."[24] The aim in Florida seems to be to encourage beginning and successive advancement in work of high school grade.[25] Dakota's desire is "to aid rural schools to high standards."[26] New Hampshire's aid is for supervision.[27] Pennsylvania's plan resembles Florida's.[28] The results in Rhode Island have justified the expectation of bringing pupils in smaller towns into contact with high schools.[29]

Summarizing, the author above quoted says that high school aid has made possible better teaching, better buildings, and better equipment. High school education is placed at the door of the child needing it.[30]

In brief, state aid to high schools has aimed to make secondary education common, public education, inspected and standardized by the state, and has aimed to overcome the handicap to secondary education arising from the fact that this type of education is on the whole more costly than that in the years below it. All these aims, state aid has accomplished in Minnesota to a highly commendable degree.

The question of importance for the state to answer now is whether aid to high schools shall be continued after its original purposes have been fulfilled. The question may be thought of as whether high school aid

[20] For general discussion see Johnston; and Bolton, *Special State Aid to High Schools, Educational Review* 31, February, 1906.
[21] *Ibid.*, Bolton, 143.
[22] *Ibid.*, 145.
[23] *Ibid.*, 145-151.
[24] *Ibid.*, 153.
[25] *Ibid.*
[26] *Ibid.*, 155.
[27] *Ibid.*
[28] *Ibid.*, 157.
[29] *Ibid.*, 158.
[30] *Ibid.*, 163.

should be given with a view to accomplishing certain purposes and then discontinued, or whether the state has adopted a permanent policy of subsidy to secondary education. In the light of the historical development of secondary support,[31] practice points decidedly in the direction of continued state subsidy in the future.

If this judgment be true, two matters are of paramount importance at this time. The first is, what shall be the conditions governing the distribution of this subsidy? If nothing else made this issue a vital one, the constantly and greatly increasing appropriations for the various forms of secondary aid would make it so.[32] The subsidy should be given where it is needed, if given at all. It is obvious that the district most needing it is the one which must impose the greatest tax levy in order to meet the minimum standards set by the state supervising agent. Why districts with valuations sufficient to raise from $600 to $800 per pupil by the average tax levy should receive the maximum state aid is inexplicable. Whether they should receive any special aid is extremely doubtful. If all special aid were withdrawn from them the state would still have the right of educational supervision and standardization by virtue of the interpretation of scholarship prerequisites as a basis for the distribution of the apportionment income.

The second question of great present importance is, why state aid to high schools is continued in such large amounts. If the primary aims connected with the establishment of this aid have been in large part served, what aims have grown out of this development?

State aid to high schools in Minnesota has accomplished results highly commendable. It has caused high schools to increase in number very rapidly. It has made it possible for the state to be extraordinarily well provided with secondary education advantages in its small cities and villages. Requirements raised from time to time by a state board, with close inspection by an impartial, unattached, professional agent of the board, have given the state's system of high schools enviable rank. The important problems which the state now faces with respect to these schools are not merely those connected with continuing to maintain high ideals of scholarship, of educational accomplishment, of teachers' requirements, or adaptation of schools and courses of study to commonwealth and community needs. One of the problems of greatest importance is a readjustment of the distribution of the special aid with distinct reference to the need, the effort, and the ability of the district concerned, with respect to the high school work of these districts. There should be a more thorough study of the high school districts to determine whether it is wise to continue

[31] C. F. Brown, *The Making of Our Middle Schools* ch. 13. Johnston et al., *The Modern High School* ch. 3.

[32] See summary at the end of Chapter 2.

to give no aid nominally to elementary schools and to give all to the high schools of such districts, or whether each should be subsidized separately.

The bases for any form of aid selected should be chosen with reference to specific aims. The methods by which it is thought that such aims are to be realized should be clearly outlined. The state should have a policy with respect both to what it is attempting and also of determining how its attempts are working. From time to time investigations and surveys should be made to determine whether the aid is accomplishing the results sought. Some such procedure is the only way of securing the desired "economy" and "efficiency."

CHAPTER IV

SPECIAL AID TO GRADED SCHOOLS

At the time that this study was made there were on the list of state graded schools 217 districts.[1] The data gathered made it possible to include in the study 206 of these.

TABLE XXVI

ATTENDANCE PER PUPIL PER YEAR BY DISTRICTS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	ATTENDANCE—DAYS
1	.5	93 to 95
6	2.9	111
3	1.5	114
7	3.4	117
8	3.9	120
11	5.3	123
18	8.7	126
15	7.3	129
16	7.8	132
22	10.7	135
25	12.1	138
20	9.7	141
12	5.8	144
15	7.3	147
11	5.3	150
8	3.9	153
6	2.9	156
1	.5	159
1	.5	162

The median time that each pupil enrolled in these 206 graded schools attends each year is 138.7 days. In the middle fifty per cent of the districts pupils attend between 128.6 and 147.2 days each.

In less than one fifth of the districts the average attendance is lower than 120 days—three times the length of time a child needs to attend school in order for the district to be granted apportionment aid. In one district the attendance averages 162 days, or slightly more than eight ninths of the maximum, while in thirty-five per cent of all the districts the average is above 140 days, or seven eighths of the possible maximum.

LENGTH OF THE SCHOOL YEAR

Only a word here need be said about the length of the school year in these districts. There can not be less than nine months in order for any school to be on the list, to receive special state aid.[2] Only a few schools have longer school years.

[1] *Eighteenth Annual Report of the Inspector of State Graded Schools*, 8.

[2] See Chapter 2 and Appendix A, *Rules of High School Board*.

TABLE XXVII

COST PER PUPIL PER DAY OF ATTENDANCE BY DISTRICTS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	COST PER DAY—CENTS
1	.5	8 to 9.9
3	1.5	10 " 11.9
7	3.4	12 " 13.9
12	5.8	14 " 15.9
13	6.3	16 " 17.9
25	12.1	18 " 19.9
29	14.1	20 " 21.9
24	11.1	22 " 23.9
18	8.7	24 " 25.9
15	7.2	26 " 27.9
18	8.7	28 " 29.9
8	3.9	30 " 31.9
4	1.9	32 " 33.9
6	2.9	34 " 35.9
6	2.9	36 " 37.9
1	.5	38 " 39.9
4	1.9	40 " 41.9
3	1.5	42 " 43.9
2	1.0	44 " 47.9
1	.5	48 " 49.9
2	1.0	50 " 63.9
4	1.9	64 " 64.9

TABLE XXVIII

AID PER PUPIL PER DAY OF ATTENDANCE BY DISTRICTS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	AID PER DAY—CENTS
3	1.5	3 to 3.9
4	1.9	4 " 4.9
13	6.3	5 " 5.9
53	25.7	6 " 6.9
63	30.6	7 " 7.9
38	18.4	8 " 8.9
8	3.9	9 " 9.9
10	4.8	10 " 10.9
3	1.5	11 " 11.9
5	2.4	12 " 12.9
1	.5	15 " 13.9
0	.0	14 " 14.9
1	.5	15 " 15.9
0	.0	16 " 16.9
0	.0	17 " 17.9
2	1.0	18 " 18.9
0	.0	19 " 19.9
0	.0	20 " 20.9
1	.5	21 " 21.9
1	.5	24 " 24.9

The median cost per pupil per day of attendance is 22.98 cents. In the middle half of the schools this cost lies between 19.4 cents and 28.7 cents. The modal group represents a cost of 20 to 20.9 cents. In the lowest eleven per cent of the districts the cost per unit does not reach 16 cents, while in the highest eleven per cent the unit cost is not below 36 cents.

The median aid per day of attendance is 7.1 cents. The quartiles are 6.4 cents and 8.4 cents. Sixty-five per cent of the schools receive 7 cents or more aid per day of attendance, or practically not less than one third the median cost per day of attendance.

TABLE XXIX

PART THAT STATE AID IS OF TOTAL ANNUAL INCOME BY DISTRICTS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	STATE AID—PER CENT
4	1.9	0 to 2.9
1	.5	3 " 8.9
1	.5	9 " 11.9
1	.5	12 " 14.9
3	1.5	15 " 17.9
10	4.9	18 " 20.9
4	1.9	21 " 23.9
24	11.1	24 " 26.9
16	7.8	27 " 29.9
38	18.4	30 " 32.9
28	13.6	33 " 35.9
29	14.1	36 " 38.9
18	8.7	39 " 41.9
10	4.9	42 " 44.9
4	1.9	45 " 47.9
6	2.9	48 " 53.9
5	2.4	54 " 56.9
2	1.0	63 " 65.9
1	.5	81 " 83.9
1	.5	87 " 89.9

The median part that state aid is of the total annual income for graded schools is 33 per cent. In one half of these schools this ratio falls between 27.55 per cent and 38.44 per cent. Nine per cent of the districts receive less than 20 per cent of their annual income from the state, while fourteen per cent of the districts receive 42 per cent or more from state aid.

The median special school tax levied by these districts to maintain their graded schools was 5.05 mills on the basis of the real valuation. The middle fifty per cent of the districts levied between 3.85 mills and 5.96 mills. Eighty-five per cent of the districts had tax levies between 2 and 8 mills. One district had a levy of 19 mills, but only three per cent of all levied over 10 mills.

TABLE XXX

SPECIAL SCHOOL TAX IN MILLS BY DISTRICTS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	SPECIAL SCHOOL TAX—MILLS
6	2.9	0 to 1.9
19	9.2	2 " 2.9
28	13.6	3 " 3.9
43	20.9	4 " 4.9
48	23.3	5 " 5.9
27	13.1	6 " 6.9
13	6.3	7 " 7.9
10	4.9	8 " 8.9
6	2.9	9 " 9.9
1	.5	10 " 10.9
3	1.5	11 " 11.9
1	.5	16 " 16.9
1	.5	19 " 19.9

TABLE XXXI

ASSESSED VALUATION PER ENROLLED PUPIL

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	ASSESSED VALUATION PER PUPIL
5	2.4	$ 250 to $ 499
9	4.2	500 " 749
31	14.6	750 " 999
57	26.9	1,000 " 1,149
50	23.6	1,250 " 1,499
21	9.9	1,500 " 1,749
10	4.7	1,750 " 1,999
5	2.4	2,000 " 2,249
7	3.3	2,250 " 2,499
3	1.4	2,500 " 2,749
3	1.4	2,750 " 2,999
3	1.4	3,000 " 3,249
1	.5	3,250 " 3,499
0	.0	3,500 " 3,749
0	.0	3,750 " 3,999
1	.5	4,000 " 4,249
0	.0	4,250 " 4,499
0	.0	4,500 " 4,749
0	.0	4,750 " 4,999
1	.5	5,000 " 5,249
1	.5	5,250 " 5,499
0	.0	5,500 " 5,749
0	.0	5,750 " 5,999
0	.0	6,000 " 6,249
0	.0	6,250 " 6,499
0	.0	6,500 " 7,749
0	.0	7,750 " 7,999
0	.0	8,000 " 8,499
1	.5	8,500 " 8,749
0	.0	8,750 " 8,999
0	.0	9,000 " 9,499
0	.0	9,500 " 10,499
0	.0	10,500 " 10,999
3	1.4	11,000 and up

The assessed valuation per enrolled pupil in 212 of these districts is $1,254. The middle fifty per cent have valuations between $1,034 and $1,582. Only four per cent have valuations over $3,250 per child, and only fourteen per cent over $2,000 per child. Over one fifth have valuations under $1,000 per child.

Summary

The typical graded school of Minnesota enrolls annually 119 pupils,[3] who attend 139 days, each pupil costing the district twenty-three cents each day he attends. Of the total income of this school one third is contributed by the state and the remainder is raised by the district through a tax of 5.05 mills on each dollar of real valuation of taxable property.

The Pearson method shows the following relationships:

TABLE XXXII

Correlations in Graded Schools

I. Number of days annual attendance per pupil and local tax levy	+ .02
II. Number of days attended per pupil during a year and per cent that state aid is of total annual maintenance income	+ .009
III. Cost per pupil per day of attendance and aid per pupil per day of attendance	+ .26
IV. Cost per pupil per day of attendance and per cent that state aid is of total annual maintenance income	— .25
V. Cost per pupil per day of attendance and number of days annual attendance per pupil	— .11
VI. Aid per pupil per day of attendance and local tax levy	+ .11

[3] In 2 districts, or 1.27 per cent of all, the enrollment is 50 to 59 pupils
" 1 district " .64 " " " " " " 60 " 69 "
" 5 districts " 3.18 " " " " " " 70 " 79 "
" 17 " "10.83 " " " " " " 80 " 89 "
" 9 " " 5.73 " " " " " " 90 " 99 "
" 14 " " 8.92 " " " " " "100 " 109 "
" 34 " "21.66 " " " " " "110 " 119 "
" 14 " " 8.92 " " " " " "120 " 129 "
" 17 " "10.83 " " " " " "130 " 139 "
" 12 " " 7.64 " " " " " "140 " 149 "
" 5 " " 3.18 " " " " " "150 " 159 "
" 5 " " 3.18 " " " " " "160 " 169 "
" 5 " " 3.18 " " " " " "170 " 179 "
" 2 " " 1.27 " " " " " "180 " 189 "
" 1 district " .64 " " " " " "190 " 199 "
" 1 " " .64 " " " " " "200 " 209 "
" 3 districts " 1.91 " " " " " "210 " 219 "
" 2 " " 1.27 " " " " " "220 " 229 "
" 2 " " 1.27 " " " " " "230 " 239 "
" 1 district " .64 " " " " " "240 " 249 "
" 2 districts " 1.27 " " " " " "280 " 289 "
" 0 " " .0 " " " " " "310 " 319 "
" 0 " " .0 " " " " " "330 " 339 "
" 1 district " .64 " " " " " "350 " 359 "
" 1 " " .64 " " " " " "360 " 369 "
" 1 " " .64 " " " " " "400 " 409 "

Graded schools have only the department of grade work, with a few exceptions. By actual count nearly one hundred of the 216 have just four instructors each, including the principal. This similarity offers the opportunity to study the effect of state aid in a group of schools more nearly representing a clearly defined type of school than any other division that it has been possible to make.[4] The division "high schools" includes both secondary and elementary departments of work. Rural schools include the so-called semi-graded and ungraded or common schools. Among the "common schools" are three classes with respect to aid. Graded schools, on the other hand, exist as a logically fairly well defined group.

Special aid to graded schools came in Minnesota seventeen years after high school aid. By common practice these two aids seem to have been granted in similar order of precedence in other states.[5] State supervision, with all its implications of high standards and requirements with respect to buildings, equipment, teachers, length of school year, curricula, and scholarship, has been the aim sought.

Graded school aid has without doubt increased the number of high schools and helped to improve the high school situation in the state. Conformity to state supervision and requirements is learned through meeting graded aid prerequisites. The state of mind and attitude of a district resulting from familiarity with requirements for grade school aid are without doubt much more favorable to the added requirements for a district's being placed upon the high school list. The general large increase of state aid through recent years indicates, too, that a district that once receives a state subsidy has an increasing appetite for more of the same kind of sustenance.

Graded school aid has without doubt lengthened the school year, raised teaching efficiency, and bettered the physical conditions under which instruction is given in these schools.

On the other hand, neither the effort the district makes nor the proportion it receives from the state seems to make any difference in the number of days a child attends (I and II).[6] There is no marked indication that cost per day of attendance and the aid per day of attendance have any relation one to another (III). Neither is there any marked indication that where this daily cost is highest the districts are receiving any particular proportion of their total income from state aid (IV). The relation between the proportion of aid and the local tax is not enough to be a basis for very definite conclusions. Table XXXIII shows a tendency toward negative correlation, however, which fact may be of some importance.

[4] See Chapter 2.
[5] See *Special State Aid to High Schools*, 31:3rd div.
[6] Roman numerals refer to items in table 32.

TABLE XXXIII

RELATION BETWEEN LOCAL TAX LEVY AND PER CENT OF ANNUAL INCOME DERIVED FROM THE STATE

TAX RATE—MILLS	PER CENT OF AID																			
	0– 2.9	3– 5.9	6– 8.9	9–11.9	12–14.9	15–17.9	18–20.9	21–23.9	24–26.9	27–29.9	30–32.9	33–35.9	36–38.9	39–41.9	42–44.9	45–47.9	48–50.9	54–56.9	63–65.9	81–83.9	87–89.9
1– 1.9									1		1	1			1		1		1	1	
2– 2.9	1						1		1			2	4	1	4	1	4				
3– 3.9		1						1	2		5	3	7	3	3			1	1		
4– 4.9							1	1	2	2	11	10	8	6	1			1			
5– 5.9	1				1		1	1	8	5	10	7	5	4		1	1	2			
6– 6.9				1		2	2		4	4	5	3	3	3							
7– 7.9							2		2	3	3			1		1		1			
8– 8.9						1	1		2	1	1	2	1		1						
9– 9.9	2						2		1		1										
10–10.9										1											
11–11.9											1		1								
16–16.9									1							1					
19–19.9								1													
31–31.9									1												
TOTALS	4	1	0	1	1	3	10	4	24	16	38	28	29	18	10	4	6	5	2	1	1
MEDIANS	7.5	3.5		6.5	5.5	6.7	7	5	5.8	6.2	5.2	4.8	4.4	4.8	3	6.5	2.5	5.2	2.5	1.5	1.5

Cost per pupil day, assessed valuation per pupil enrolled, and the special school levy distributions do not contain many cases of great extremes. The attendance in days per pupil and the per cent of revenue from the state have their distributions less centered. The variability from the central tendency in the last named distribution is probably accentuated by the fact that a few schools receive aid other than that merely for graded schools, as aid for consolidation, aid for industrial work, or aid for two years of high school work.

In the data studied there is no proof that special state aid to graded schools has resulted in any condition that is distinctly bad. The relationship between cost and per cent of state aid shows a tendency that may result in districts which are not needy receiving too large a proportion from the state. The danger of this result will always be present and the result itself will tend to creep in in greater or less degree as long as the aid is distributed without any reference to local ability or local effort.

Local communities and the state at large have received, it appears, two main benefits from aid to this group of schools: first, elementary schools and school work have been standardized; second, communities have qualified for high school rank much sooner than without the stimulating effect of the intermediate experience of receiving graded school aid. Each of these results is highly justifiable. There is one question, however, that is worth while raising in this connection. It is, whether, with the liberal amount of aid now given this type of school, more definite encouragement could not be offered for communities to do something different than the stereotyped form of work, particularly in the grammar grades. It is true that such incentive has been offered through additional aid.

TABLE XXXIV

GRADE SCHOOL SUMMARY

ITEM	MEDIAN	QUARTILES	
Annual attendance per pupil	138.7 days	129.6 days	147.2 days
Cost per pupil day	23.0 cents	19.4 cents	28.7 cents
Aid per pupil day	7.1 cents	6.4 cents	8.4 cents
Per cent of state aid	33.0 per cent	27.6 per cent	38.4 per cent
Local tax levy	5.1 mills	3.9 mills	6.0 mills
Assessed valuation per pupil	$1,254	$1,034	$1,582
Length of school year	9 months.[7]		

[7] The modal length. It is the minimum and is exceeded by a negligible number of the 212 schools.

It has already proven distinctly worth while to encourage communities to do independent things even though they can not or do not aspire to establish even a partial high school. Industrial work for both boys and girls should be encouraged below the high school. In some schools departmental work could be introduced. It does not seem as though the state needs to wait on special appropriations to encourage specific experiments and increments of work among graded schools. It is quite probable that conscious administration of the graded aid to encourage the special and varied forms of effort would tend to bring results of similar nature to those that have been sought so far only through additional aid for special work.

CHAPTER V

SPECIAL AID TO RURAL SCHOOLS

Of the three groups of schools which were to be discussed only one group, that of the rural schools, remains. The facts concerning the seven factors already discussed for high and graded school districts will be presented first. These will be followed by a discussion of certain implications true for the rural field only.

TABLE XXXV

NUMBER OF ACTUAL DAYS ATTENDANCE PER PUPIL, BY DISTRICTS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	ATTENDANCE—DAYS
2	.2	30 to 34
3	.3	35 " 39
4	.4	40 " 44
4	.4	45 " 49
10	1.0	50 " 54
17	1.7	55 " 59
30	2.9	60 " 64
41	4.0	65 " 69
51	5.0	70 " 74
52	5.1	75 " 79
72	7.1	80 " 84
79	7.8	85 " 89
96	9.5	90 " 94
76	7.5	95 " 99
80	7.9	100 " 104
86	8.5	105 " 109
82	8.1	110 " 114
68	6.7	115 " 119
42	4.2	120 " 124
37	3.7	125 " 129
27	2.7	130 " 134
15	1.5	135 " 139
19	1.9	140 " 144
7	.7	145 " 149
5	.5	150 " 154
2	.2	155 " 159
2	.2	160 " 164
1	.1	165 " 169
1	.1	170 " 174

The median length of time that a pupil in a rural district attends school during the year is 97.9 days. The quartiles of attendance are 81 days and 112 days. The distribution of this attendance is given in Table XXXV. The modal attendance time is in the group "90 to 95 days"; the median and the mode are thus in adjoining groups. Fifty-three per cent attend less than 100 days, or five months a year. Less than sixteen

per cent attend 120 days, or six months. On the other hand, 99.5 per cent attend 40 days or more, the attendance required for sharing in the current school fund.

TABLE XXXVI

LENGTH OF SCHOOL YEAR IN MONTHS

The number of districts having a school year								of	three		months is			1
"	"	"	"	"	"	"	"	from	3	to	4	"	"	1
"	"	"	"	"	"	"	"	"	4	"	5	"	"	32
"	"	"	"	"	"	"	"	"	5	"	6	"	"	80
"	"	"	"	"	"	"	"	"	6	"	7	"	"	165
"	"	"	"	"	"	"	"	"	7	"	8	"	"	606
"	"	"	"	"	"	"	"	"	8	"	9	"	"	201
"	"	"	"	"	"	"	"	"	9	"	10	"	"	9

The median length of the school year in 1,095[1] districts is 7.7 months. The middle one half of these districts have a school year between 6.9 months and 7.8 months in length.

There is a very clearly marked mode at eight months. One half of all these schools have less than eight months of school annually, while only one half of one per cent have less than seven months.

If the length of these school years be calculated in days then the table would read: One school has a year of between 41 and 60 days, etc., and the median length is 148.9 days. This is 16.4 days longer than the length of rural schools in Minnesota as found by the Bureau of Education for the year 1909-10.[2] The Bureau, however, includes in the group, "rural schools," all schools not in cities of 2,500 or more inhabitants.[3]

On the other hand, the median school year in the Minnesota rural school, as that division is here used, is 11.2 days longer than the average school year in all rural schools in the United States, as reported by the Bureau.[4] In reality this means that the one- and two-room rural schools of Minnesota are really considerably in advance of the rest of the schools in their own class over the country as a whole. On the other hand, it is doubtful whether the state is very far in advance of the central tendency of the other states in its own geographical division of territory. The accompanying figure shows the general tendency toward increasing length of school years. Minnesota falls in the North Central Division.

One would naturally expect that the special aid of the rural schools in Minnesota would result in a lengthened school year. The length of the

[1] More than 1,011 districts from the fourteen counties could be included in this item. Since this factor was not used in any correlations there is no point in making the number correspond with the number of districts used in the correlations. Hence, 1,095 instead of 1,011.

[2] Monahan, The Status of Rural Education in the United States, *United States Bureau of Education Bulletin* no. 8 p. 23. 1913.

[3] *Ibid.*, 10.

[4] *Ibid.*, 23.

school year is one of the two essential requirements conditioning such aid.[5] It may be very seriously doubted whether this aid has kept these schools in session longer each year than the average school year for other rural schools in the same part of the country.[6]

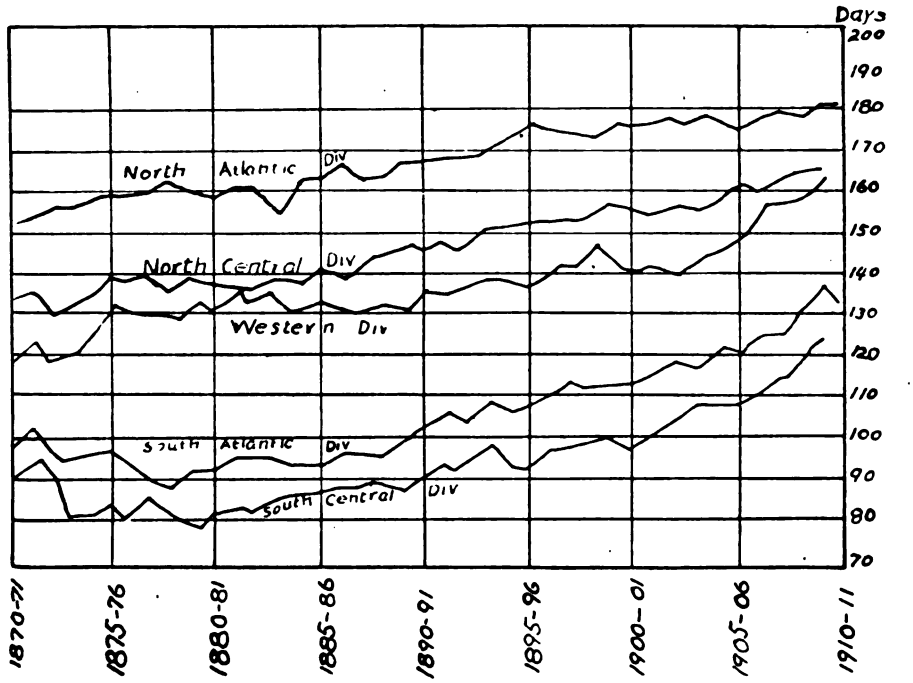


Figure 2[7]
Increasing length of term, in days

The median cost per day of actual attendance per pupil is 22.9 cents. In the middle half of the districts this cost is between 17.08 cents and 31.86 cents. The modal cost is between 15 and 20 cents. This is only the second step removed from the group of lowest cost, but the eighteenth step from the group of highest cost. In this item there is, then, a very marked tendency toward an appearance of scattered cases of districts in which the cost is much higher than the median, but for no such scattering to appear below the median cost. In over seventy per cent of the districts the cost is less than 30 cents per pupil per day, while in over thirty-eight per cent it is less than 20 cents. In only slightly more than two per cent of the districts is the cost above 75 cents.

[5] See Chapter 2.
[6] Cf. *Rural Life and Education*, 100.
[7] From Cubberley's *Rural Life and Education*, 101 (with the publisher's permission).

TABLE XXXVII

COST PER PUPIL PER DAY OF ATTENDANCE BY DISTRICTS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	COST PER DAY—CENTS
6	.59	5 to 9.9
146	14.44	10 " 14.9
240	23.74	15 " 19.9
199	19.78	20 " 24.9
130	12.85	25 " 29.9
99	9.79	30 " 34.9
54	5.34	35 " 39.9
41	4.05	40 " 44.9
21	2.07	45 " 49.9
22	2.16	50 " 54.9
9	.89	55 " 59.9
6	.59	60 " 64.9
4	.39	65 " 69.9
11	1.08	70 " 74.9
5	.49	75 " 79.9
3	.20	80 " 84.9
7	.69	85 " 89.9
1	.09	90 " 94.9
1	.09	95 " 99.9
1	.09	100 " 104.9
5	.49	105 " 109.9 and up

TABLE XXXVIII

STATE AID PER PUPIL PER DAY OF ATTENDANCE BY DISTRICTS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	AID PER DAY—CENTS
1	1	0.1 to 0.9
4	.4	1 " 1.9
1	.1	2 " 2.9
19	1.9	3 " 3.9
78	7.7	4 " 4.9
119	11.8	5 " 5.9
113	11.2	6 " 6.9
143	14.1	7 " 7.9
168	16.6	8 " 8.9
119	11.8	9 " 9.9
100	9.9	10 " 10.9
48	4.7	11 " 11.9
32	3.1	12 " 12.9
26	2.6	13 " 13.9
10	1.0	14 " 14.9
7	.7	15 " 15.9
6	.6	16 " 16.9
4	.4	17 " 17.9
2	.2	18 " 18.9
6	.6	19 " 19.9
1	.1	20 " 20.9
1	.1	21 " 21.9
1	.1	23 " 23.9
1	.1	25 " 25.9
1	.1	27 " 27.9
2	.2	45 " 45.9

The median aid per day of actual attendance is 8.8 cents. The mode falls in the same group as the median. The middle half of all the districts receive aid per day between 6.2 cents and 9.5 cents. In twenty-five of the districts the aid is over 10 cents per pupil daily; in ten per cent, the aid is less than 5 cents per day.

TABLE XXXIX

THE PER CENT THAT STATE AID IS OF THE TOTAL ANNUAL INCOME FOR MAINTENANCE BY DISTRICTS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	STATE AID—PER CENT
10	1.0	0 to 4.9
20	2.0	5 " 9.9
57	5.6	10 " 14.9
72	7.1	15 " 19.9
68	6.7	20 " 24.9
110	10.9	25 " 29.9
113	11.2	30 " 34.9
125	12.4	35 " 39.9
132	13.0	40 " 44.9
99	9.8	45 " 49.9
96	9.5	50 " 54.9
51	5.0	55 " 59.9
30	3.0	60 " 64.9
16	1.6	65 " 69.9
4	.4	70 " 74.9
4	.4	75 " 79.9
3	.3	80 " 84.9
1	.1	95 " 99.9

TABLE XL

LOCAL TAX FOR MAINTENANCE AS PER MILLS OF REAL TAXABLE VALUATION

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	LOCAL TAX—MILLS
201	19.88	0 to .9
445	44.01	1 " 1.9
190	18.79	2 " 2.9
53	5.24	3 " 3.9
68	6.73	4 " 4.9
23	2.27	5 " 5.9
8	.79	6 " 6.9
8	.79	7 " 7.9
5	.49	8 " 8.9
7	.69	9 " 9.9
1	.09	10 " 10.9
2	.19	11 " 11.9

The median part that the two kinds of state aid constitute of the year's total income is 37.2 per cent. The middle half of these districts receive directly from the state between 25.7 per cent and 45.5 per cent of their total annual income for maintenance. This includes many districts

whose only receipt from the state is the apportionment money. There is a fairly clearly marked mode in the "40 per cent to 45 per cent" group. On account of the fact that 45 per cent aid marks practically the end of three fourths of the number of cases, however, the median falls quite a little above this modal per cent.

Over twenty per cent of all the districts receive 50 per cent or more directly from state funds, while only twenty-two per cent receive less than 25 per cent from the state.

It should be remembered that of the 1,011 districts included in this array, only 461 receive special aid for rural schools; 550 receive only the current school fund.

TABLE XLI

ASSESSED VALUATION PER ENROLLED PUPIL BY DISTRICTS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	ASSESSED VALUATION PER PUPIL
9	1.44	below $ 300
24	3.84	$ 300 to 499
25	4.00	500 " 699
38	6.08	700 " 899
56	8.96	900 " 1,099
43	6.88	1,100 " 1,299
39	6.24	1,300 " 1,499
35	5.60	1,500 " 1,699
41	6.56	1,700 " 1,899
29	4.64	1,900 " 2,099
27	4.32	2,100 " 2,299
33	5.28	2,300 " 2,499
36	5.76	2,500 " 2,699
20	3.20	2,700 " 2,899
19	3.04	2,900 " 3,099
20	3.20	3,100 " 3,299
13	1.98	3,300 " 3,499
10	1.60	3,500 " 3,699
14	2.24	3,700 " 3,899
8	1.28	3,900 " 4,099
5	.80	4,100 " 4,299
10	1.60	4,300 " 4,499
9	1.44	4,500 " 4,699
4	.64	4,700 " 4,899
8	1.28	4,900 " 5,099
2	.32	5,100 " 5,299
4	.64	5,300 " 5,499
37	5.92	5,500 and above

The median special local school tax levy on the real valuation of the property is 1.7 mills per district. In the middle fifty per cent of the districts this tax varies from 1.7 mills to 1.58 mills. The modal tax is very clearly "1 to 1.9 mills," in the same group as the median. In over eighty-four per cent of the districts the tax is less than 3 mills. In ninety-seven per cent of the districts it is less than 6 mills. This striking central

tendency is paralleled only by the fact that forty-four per cent of all the cases are in the modal (median) group.

This remarkable similarity among rural districts with respect to their tax levies is not to be interpreted to mean equal similarity with respect to actual school support—the amount actually raised for schools in these districts. This fact is clearly shown by a consideration of the assessed valuation per enrolled pupil. The latter item was computed for a random selection of 618 districts out of the 1,011 districts.

The median assessed valuation per enrolled pupil in 618 rural school districts is $2,195. In one half of these districts the valuation per pupil is between $1,321 and $3,273. Ten per cent of the districts with the highest valuation would yield from $450 to over $550 per pupil with a tax levy of 10 mills on the assessed valuation. The ten per cent of lowest valuation would yield between $30 and $70 approximately from a similar levy. So far as unequal abilities among individual districts are concerned, there is plenty of justification for some plan of state aid that shall tend to equalize the burden of support.

The lists of districts with their respective valuation, in Table XLIII, show the inequality among districts in one county of southwestern Minnesota.

TABLE XLII

MONTHLY SALARY OF RURAL TEACHERS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	MONTHLY SALARY OF RURAL TEACHERS
10	1.0	$30 to $34
54	5.3	35 " 39
176	17.4	40 " 44
231	22.9	45 " 49
305	30.2	50 " 54
137	13.5	55 " 59
69	6.6	60 " 64
23	2.3	65 " 69
6	.6	70 " 74
2	.2	75 " 79

The median monthly salary of teachers in 1,011 districts is $51.14. The middle fifty per cent of districts have salaries ranging from $45.63 to $56.30 per month. There is a clearly marked mode in the "$50 to $55" group, where the median falls. About twenty-four per cent of the districts pay less than $45 per month, while only nine and seven-tenths per cent pay $60 or more.

TABLE XLIII

Blue Earth County

I certify that the following is a correct statement of the school tax rate and assessed valuation for the school districts of Blue Earth County for the school year ending July 31, 1913.

Signed—C. L. Kennedy, *County Auditor*

School Districts

(Include in the special school tax the local 1-mill but not the state 1-mill tax.)

Name or Number	Assessed Valuation	Special School Tax	Name or Number	Assessed Valuation	Special School Tax
1	$4,187,699	10.0	85	$ 79,174	3.3
2	69,242	1.5	86	113,177	1.3
3	64,033	1.6	87	236,727	8.5
4	41,712	4.8	88	65,391	2.3
5	62,255	3.2	89	115,160	2.3
6	50,950	3.0	90	72,681	2.8
7	110,087	8.4	91	71,143	4.2
8	83,462	4.2	92	68,752	2.9
10	65,481	4.2	94	92,023	1.1
11	136,924	0.6	95	104,164	2.0
12	74,744	4.0	96	47,540	0.0
13	44,254	3.4	97	108,704	1.9
14	61,135	2.9	98	57,720	7.0
15	81,753	2.8	99	114,065	2.7
16	117,880	10.2	100	110,190	14.2
17	62,034	4.8	103	62,688	8.0
19	450,042	18.6	104	66,221	3.0
20	110,813	1.4	105	324,670	17.0
21	93,740	3.7	106	78,346	4.3
22	40,022	5.4	107	38,054	6.6
24	70,057	3.3	108	47,822	3.7
25	187,974	7.6	109	158,782	1.0
26	74,421	2.1	110	43,089	4.7
27	50,040	0.0	111	56,312	3.6
28	105,862	3.8	112	251,848	20.0
29	69,499	2.9	113	65,399	4.6
30	82,512	2.4	114	56,121	3.6
31	89,084	1.1	115	128,828	2.0
32	108,040	3.2	116	122,958	0.8
33	110,199	1.8	117	66,818	2.3
34	80,201	2.8	118	56,007	6.3
35	19,919	4.0	119	76,109	2.6
36	75,051	1.0	120	57,521	4.4
38	64,740	0.0	121	67,927	3.7
40	81,091	2.2	122	89,657	1.7
40	77,695	4.2	123	34,811	11.2
41	83,097	4.0	124	51,226	4.0
42	81,478	1.0	125	75,611	2.7
43	93,009	16.0	126	60,858	1.7
44	91,199	1.0	127	47,882	4.2
45	85,053	12.0	128	57,632	2.6
46	19,070	0.1	129	40,441	3.7
47	76,469	2.4	130	118,732	1.7
48	56,098	4.0	131	80,216	1.3
49	79,871	2.8	133	61,894	4.1
50	15,491	5.5	135	52,805	2.9
51	54,628	4.7	136	59,240	6.8
52	45,062	0.7	137	92,922	1.6

TABLE XLIII—Continued

Name or Number	Assessed Valuation	Special School Tax	Name or Number	Assessed Valuation	Special School Tax
53	74,384	2.0	138	61,134	5.6
55	90,728	2.2	139	49,607	5.0
56	69,348	5.6	140	38,650	6.5
57	65,953	3.8	141	68,758	4.4
58	48,633	4.2	142	52,544	4.8
59	47,428	5.0	143	41,122	7.3
61	55,181	7.5	144	85,580	1.3
63	75,891	5.3	145	32,076	9.4
66	107,888	1.9	146	176,380	11.3
67	85,645	3.5	147	75,716	2.7
69	62,299	2.6	148	38,648	5.2
71	64,796	4.1	149	59,828	9.2
72	74,148	6.1	150	51,383	4.9
74	112,600	1.8	151	39,377	7.7
75	82,542	3.0	152	46,844	6.4
76	51,578	2.4	153	33,136	4.5
77	69,095	3.6	154	36,596	6.1
78	79,430	3.8	155	63,004	3.6
79	66,387	5.0	156	45,636	6.4
80	55,775	4.5	157	60,235	0.9
83	146,265	5.1			

Statistics taken from the biennial state reports covering the respective years indicate that salaries are rising fast in these schools in Minnesota while total enrollment slowly declines. The figures for total enrollment and for total salaries are platted to show the per cent of change in each since 1903.

Figure 3 indicates clearly that while enrollment has been slightly declining, almost steadily, during these eleven years, the cost of rural education has risen greatly. The rise in the amount spent for salaries and the close paralleling of the lines for total cost and for salaries would seem to indicate that the factor most responsible for rise in total cost is rise in salaries.

The rise in total cost for rural education is not peculiar to Minnesota. The accompanying figure shows the increase of cost on the basis of average daily attendance for the United States, by geographical divisions, from 1870-71 to 1910-11.

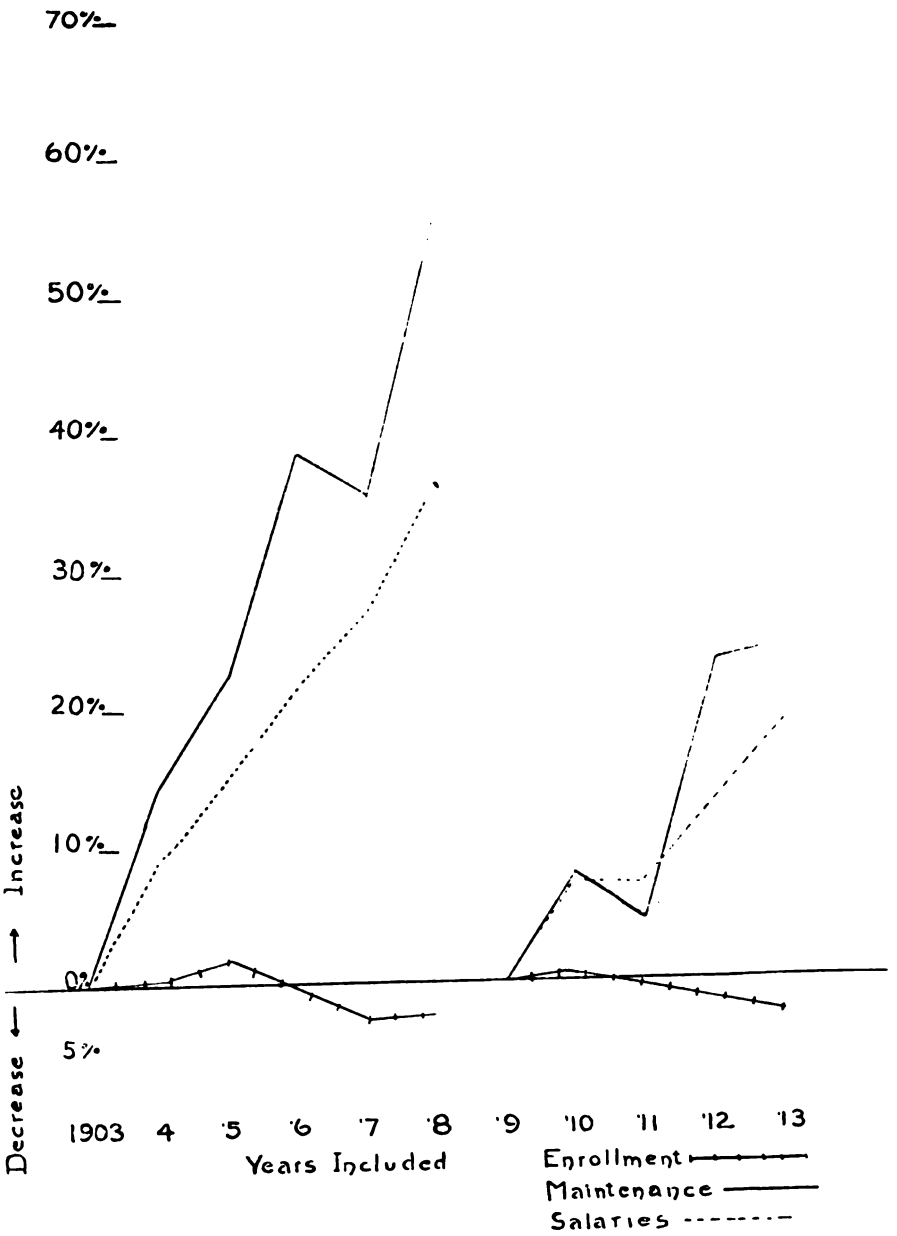


Figure 3[8]

Changes in the rural schools of Minnesota during a period of ten years

[8] In 1909 the State Department of Education changed the basis for classifying the rural schools. Hence arises the necessity of the break in figure 3 between 1908 and 1909, beginning on the base line again for the latter year.

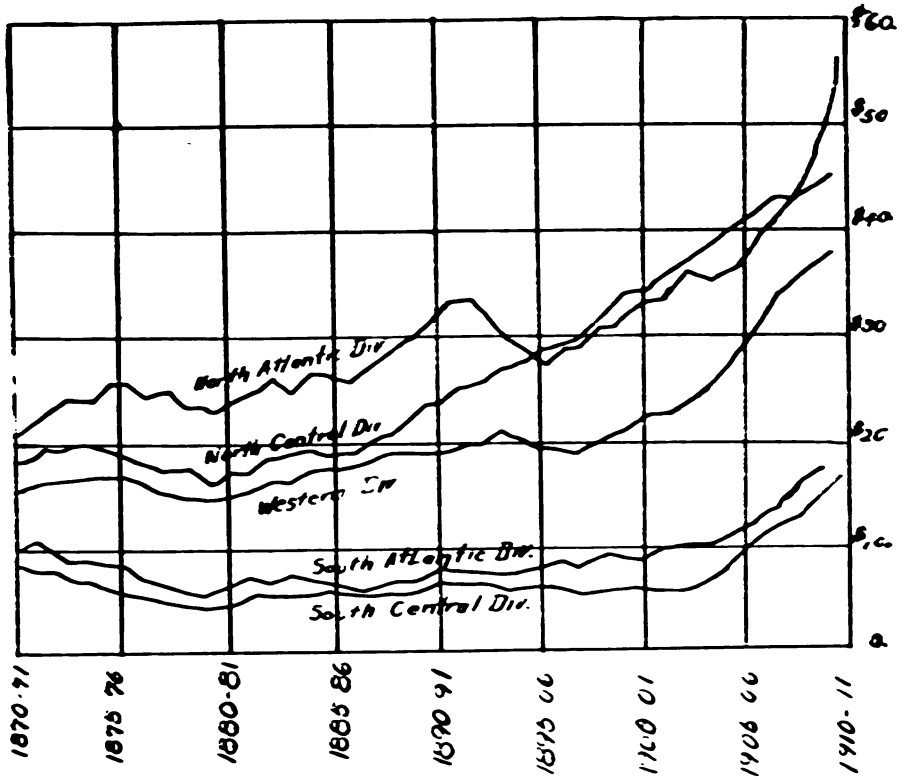


Figure 4[9]

Increasing cost of education per pupil in average daily attendance

Having collected certain data we now have working concepts. By the use of these concepts we are able to determine the nature and extent of relations between certain important factors in the rural schools. The method of comparison is that of the Pearson coefficient. The figures used as the basis of the computations are distributions in the preceding tables.

TABLE XLIV

CORRELATIONS IN RURAL SCHOOLS

I. Number of days annual attendance per pupil and per cent that state aid is of total annual maintenance income	+ .11
II. Local tax levy and monthly salary of teacher	+ .18
III. Monthly salary of teacher and per cent that state aid is of total annual maintenance income	+ .24
IV. Local tax levy and per cent that state aid is of total annual maintenance income	— .32
V. Monthly salary of teacher and number of days annual attendance per pupil	+ .38

NOTE: None of these coefficients is corrected for attenuation.

[9] From *Rural Life and Education*, 99 (with the publisher's permission).

There are only two correlations that are of significance. The first is the one between the districts' special school tax levy and the amount that districts receive from the state for the support of their schools (IV). The relation here is negative and although unattenuated, large enough to indicate a decided tendency. There have been a good many statements made to the effect that state aid to rural schools has been an incentive to the schools to do greater things. It is probably true that the conditions requisite for aid have been complied with by the schools that have received this aid. Further than the specific changes brought by such compliance, however, the assertions of resulting benefit have not been demonstrated. They have never been more than opinions on the part of individuals who have more or less intimate knowledge of the facts and who represent great variability with respect to unbiased judgment on the issue.

Here is a correlation figure which shows that there is a marked tendency for rural school districts to raise, and hence to expend, *less* of their own money on schools, the *more* they are given in subsidy by the state. The influence of state aid is negative. Lower local school taxes accompany increase in state aid. So far as the special tax for school maintenance is a measure of local effort, state aid to rural schools has not been an incentive to such effort. The effects of such financial assistance have been rather to cause the benefited districts to make less exertion to maintain their schools than if the aid had not been given.

Some may still insist, of course, that in order for a school to receive any special state aid certain minimum requirements, enumerated above,[10] must be met. To meet these requirements an extra expenditure is necessary. This fact may be quite true. We have no doubt that the incentive of obtaining state aid has served to increase the length of the school year in many districts. Just how far this has been true we have no basis for judging. It is highly significant, though, that after all the necessary standards have been met, the districts that receive the aid are able to make a financial profit to their tax payers because of this aid.

Again, it may be claimed that the districts which previously had the higher school taxes, receive the special aid, and hence it is only just that this aid should lessen the local burden. If this assertion were true it ought to follow that after special state aid had been given to a considerable number of districts over a period of time, rural school taxes would tend to approach a level. There is no indication anywhere that such a level exists or tends to exist by reason of such assistance.

Our discussion so far has included both those districts that receive special state aid and those that do not, the latter receiving only the apportionment. Let us look for a moment at the former, those districts receiving each kind of aid.

[10] Chapter 2.

Of the 1,011 districts included in the study, 461 receive one of the three amounts of special state aid given to semi-graded and rural schools in 1912. The taxes in these 461 districts ranged as follows.[11]

TABLE XLV

LOCAL TAX RATE IN MILLS

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	LOCAL TAX RATE IN MILLS
18	3.9	.3 to .5
55	11.9	.6 " .8
87	18.9	.9 " 1.1
78	16.9	1.2 " 1.4
65	14.1	1.5 " 1.7
37	8.0	1.8 " 2.0
30	6.5	2.1 " 2.3
28	6.1	2.4 " 2.6
10	2.2	2.7 " 2.9
11	2.4	3.0 " 3.2
8	1.7	3.3 " 3.5
5	1.1	3.6 " 3.8
6	1.3	3.9 " 4.1
3	.7	4.2 " 4.4
6	1.3	4.5 " 4.7
6	1.3	4.8 " 5.0
1	.2	5.1 " 5.3
2	.4	5.4 " 5.6
1	.2	6.6 " 6.8
1	.2	7.3 " 7.5
1	.2	7.9 " 8.1
1	.2	11.2 " 11.4

The median tax levy in these 461 districts is 1.4 mills on the dollar. In the middle fifty per cent of all the districts the levy is between .9 mills and 2 mills. In the 1,011 districts it is 1.9 mills on the dollar. There is a decrease of one fifth in the median amount of local effort expended in this group as compared with the group of all the rural districts.

We should naturally expect that the money which the state contributed toward the up-keep of the schools in these districts would be a larger proportion of the total annual maintenance receipts than for the 1,011 districts. Table XLVI shows that this is true.

The median portion of maintenance income which these 461 districts receive from the state is 46 per cent. The median for the 1,011 districts was 37.2 per cent. Thirty-four per cent of these districts receive one half or more of their annual income from the state. Only three per cent receive less than one fifth from the state, and only fourteen per cent receive less than one third from the state.

Between seventy-five and eighty per cent of the rural schools that receive special state aid are reimbursed more than one third of their total

[11] Based on true valuation as in table on p. 37.

maintenance fund; nearly one third receive from the state over 50 per cent of such fund; and it is possible for a district to receive nearly the whole amount from the state funds.[12]

TABLE XLVI

PER CENT THAT STATE AID IS OF DISTRICTS' ANNUAL INCOME

NUMBER OF DISTRICTS	PER CENT OF ALL DISTRICTS	STATE AID—PER CENT
1	.2	5 to 7.9
2	.4	8 " 10.9
2	.4	11 " 13.9
4	.9	14 " 16.9
3	.7	17 " 19.9
2	.4	20 " 22.9
14	3.0	23 " 25.9
15	3.3	26 " 28.9
21	4.6	29 " 31.9
32	6.9	32 " 34.9
31	6.7	35 " 37.9
41	8.9	38 " 40.9
42	9.1	41 " 43.9
54	11.7	44 " 46.9
40	8.7	47 " 49.9
42	9.1	50 " 52.9
39	8.5	53 " 55.9
24	5.2	56 " 58.9
18	3.9	59 " 61.9
13	2.8	62 " 64.9
5	1.1	65 " 67.9
7	1.5	68 " 70.9
1	.2	71 " 73.9
4	.9	74 " 76.9
1	.2	77 " 79.9
2	.4	80 " 82.9
1	.2	83 " 99.9

The coefficient of correlation between the two items of local tax and per cent received from the state for these 461 districts is +0.34. Here again is a significant increase. In the first place, it is substantial evidence of the assertions already made concerning the relations of the item of local tax and state aid in rural districts. In the second place, it shows that

[12] *Preston Times*, Thursday, May 11, 1916. "The people of the Model School north of town met Friday evening and deliberately threw away good money,—that is a majority of them did, the minority, who knew better, were voted out and helpless. The proposition was to associate with the Agricultural Department of the Preston High School and they spurned it, cast it out as something unclean. The fact that the district now receives $150, special state aid; $90 from the Preston District for Model School purposes; $70 apportionment, and could receive $50 by associating, while it pays into the state treasury only $62.90, did not affect the result; a net balance of $298.90 was no argument at all,—to those who would be convinced. The ultimate result of this incomprehensible bull-headedness is the loss of the $50 which it could have received by associating; a probable loss of its first-grade standing and the certain loss of the $90, by reason of its selection as a Model School. Incidentally the Preston District is deprived of $200 for Agricultural instruction and perhaps the abandoning of the Department altogether as we can not for long afford to bear alone an expense by which we are only indirectly benefited. The Model School district was given an opportunity to get something worth while absolutely without additional cost and refused it. Those responsible can now repent at leisure."

special state aid is the important factor in this increase of the figure of correlation. It must be, since no other condition has been changed from the conditions of all the 1,011 districts. In the third place, it shows that the current fund is equivalent to state aid in its general effect upon rural districts. If it were not, the correlation figure for the 1,011 districts would not be so large. For the state to pay a district $5.30 for each and every child attending a total of forty days during the year is the same as for it to pay that sum for over ninety-nine per cent of all those who enroll.[13] The low limiting condition of forty days attendance tends to approach no condition at all. In this particular then, the current fund receipts tend to act in a manner similar to that of the special aid to rural schools.

These results show conclusively that local endeavor among the constituency of the rural schools has a marked tendency to decrease as the state assists by special financial aid. This is a fact of tremendous significance. If the fifteen months' work of the Education Commission and this whole study brought forth nothing else, the whole cost involved would be many times made up to the state should this one fact be made the basis of action in distributing aid. One difficulty in attaining the desired goal is that appropriations for these funds have not been settled according to educational needs or expected results. Intelligent laymen recognize this fact.

The Dawson, Minnesota, *Sentinel* darkly intimates that dire things are to happen to those members of the legislature who succeeded in preventing the division of a million dollars among the rural schools of the state.

The *Sentinel* also resents the tendency of the press to speak of this plan as a "Pork Barrel" proposition. It denounces as inconsistent the appropriation of millions for the University and Normal schools, and denial of an extra million to the rural schools, "which educate half a million children every year, and furnish ninety-nine per cent of the people all the training for citizenship they ever receive."

The fact that the University and Normal schools are purely state institutions, while the common schools are local institutions, does not seem to have occurred to the *Sentinel* as important. Its reasoning points to a theory that the state should raise taxes enough to pay for all the schools, though state control of the local schools would doubtless be resented.

Such arguments as these miss completely the purpose of state aid to local schools. This aid is given as a stimulus to better work. It is conditioned on local performances of certain things,—quality of teaching, length of terms taught, number of pupils, and so on.

When state aid becomes merely a means of maintenance and of lifting from the various school districts their financial burdens, it misses its purpose. The distribution of an extra million among the rural schools, it seems to us, was properly characterized as a "Pork Barrel" proposal. It was not intended for the good of the schools, but for the relief of local tax payers. Its killing was one of the few good things the legislature did.[14]

[13] See table 35.

[14] Editorial in the *Minneapolis Journal*, May 3, 1915.

The second of the two correlations worthy of note is the one between teachers' monthly salaries and the number of days attended annually per pupil. The correlation figure is significantly large; and it is positive. Pupils go to school more days in a year in those districts where the teachers are paid the highest wages. This figure does not tell why the fact is true. It merely tells the fact, and is in itself proof that there is a strong tendency for the two facts to accompany each other.

The significance of the presence of the two above relations is equalled in importance only by the lack of those relations one would naturally expect but does not find. There is no indication that state aid, even in causing fulfillment of the minimum requirements for its bestowal, has made any difference in the number of days a pupil attends school in a year. We do know, on the other hand, that the well paid teacher and long attendance tend to go together. Does state aid raise teachers' salaries? Not so far as we can discover. Neither directly, then, nor indirectly, has this aid any apparent result in causing country children actually to spend more days in the schools. One naturally asks where it does count. The facts discovered answer "to no small degree, in lessening the local tax." We may be quite as much surprised to discover that high taxes and high salaries are not coexistent. Such is the truth, however, in spite of the fact that increased salaries seem to account in a large part for great increase in the total annual cost of these schools.

TABLE XLVII

INCREASE IN THE NUMBER OF SCHOOLS HAVING A TOTAL ANNUAL ENROLLMENT OF LESS THAN TEN PUPILS EACH

YEAR	NUMBER OF SCHOOLS	PER CENT INCREASE OVER 1903-04
1903-1904	189	....
1904-1905	228	20.6
1905-1906	237	25.4
1906-1907	252	33.3
1907-1908	258	36.5
1908-1909	278	47.1
1909-1910	335	77.2
1910-1911	346	83.0
1911-1912	360	85.2
1912-1913	373	97.3

THE SMALL RURAL SCHOOL

In the course of this part of the study it was accidentally discovered that there are in this state a large number of schools with remarkably small annual enrollments, each school enrolling less than ten pupils indeed, during the whole year's session. A review of the last few years shows a great increase in the number of these small schools. The biennial reports

of the state superintendent of education show that the number of schools enrolling less than ten pupils increased over ninety-seven per cent between 1903 and 1912. This is brought out more clearly in Table XLVII and Figure 5.

This table reads: In the school year 1903-04 Minnesota had 189 rural schools, each enrolling a total of less than ten pupils. In 1904-05 the number of such schools in the entire state was 228, an increase of 20.6 per cent over the number in 1903-04; in 1904-05 the number was 237, an increase of 25.4 per cent over 1903-04; etc.

The increase in the number of these schools between 1903 and 1912 is almost twice the proportional increase in the next larger enrollment-school reported. Schools enrolling between ten and twenty pupils have increased only a little over fifty-seven per cent in the same period of time.

TABLE XLVIII

INCREASE IN THE NUMBER OF SCHOOLS HAVING A TOTAL ENROLLMENT OF TEN TO TWENTY PUPILS EACH

YEAR	NUMBER OF SCHOOLS ENROLLING 10 to 20 PUPILS	PER CENT INCREASE IN NUMBER SINCE 1903
1903-1904	1,204	....
1904-1905	1,294	7.4
1905-1906	1,369	13.7
1906-1907	1,467	21.8
1907-1908	1,621	34.6
1908-1909	1,703	41.5
1909-1910	1,834	52.3
1910-1911	1,911	58.7
1911-1912	1,802	49.6
1912-1913	1,896	57.4

The smallest school seems to persist more in the very old, or in the new, sparsely developed states. Virginia, Maine, Ohio, Iowa, and North Dakota illustrate these two types.[15] But Minnesota can not be called old, neither as a state is it undeveloped or scantily populated. Special state aid has been given to rural schools in the state since 1899, when 457 one-room schools were aided. In 1912 over 4,400 received such aid.[16] In Indiana, the township trustees may "discontinue and temporarily abandon all schools at which the average daily attendance during the last preceding year has been fifteen pupils or fewer"; they "*shall*[17] discontinue and temporarily abandon" schools whose daily average attendance has been twelve or less, though a majority of the patrons of the district may by petition reopen either.[18]

[15] Gillette, *Constructive Rural Sociology*, 236, 237. Also *United States Bureau of Education Bulletin* no. 8 p. 26. 1913.

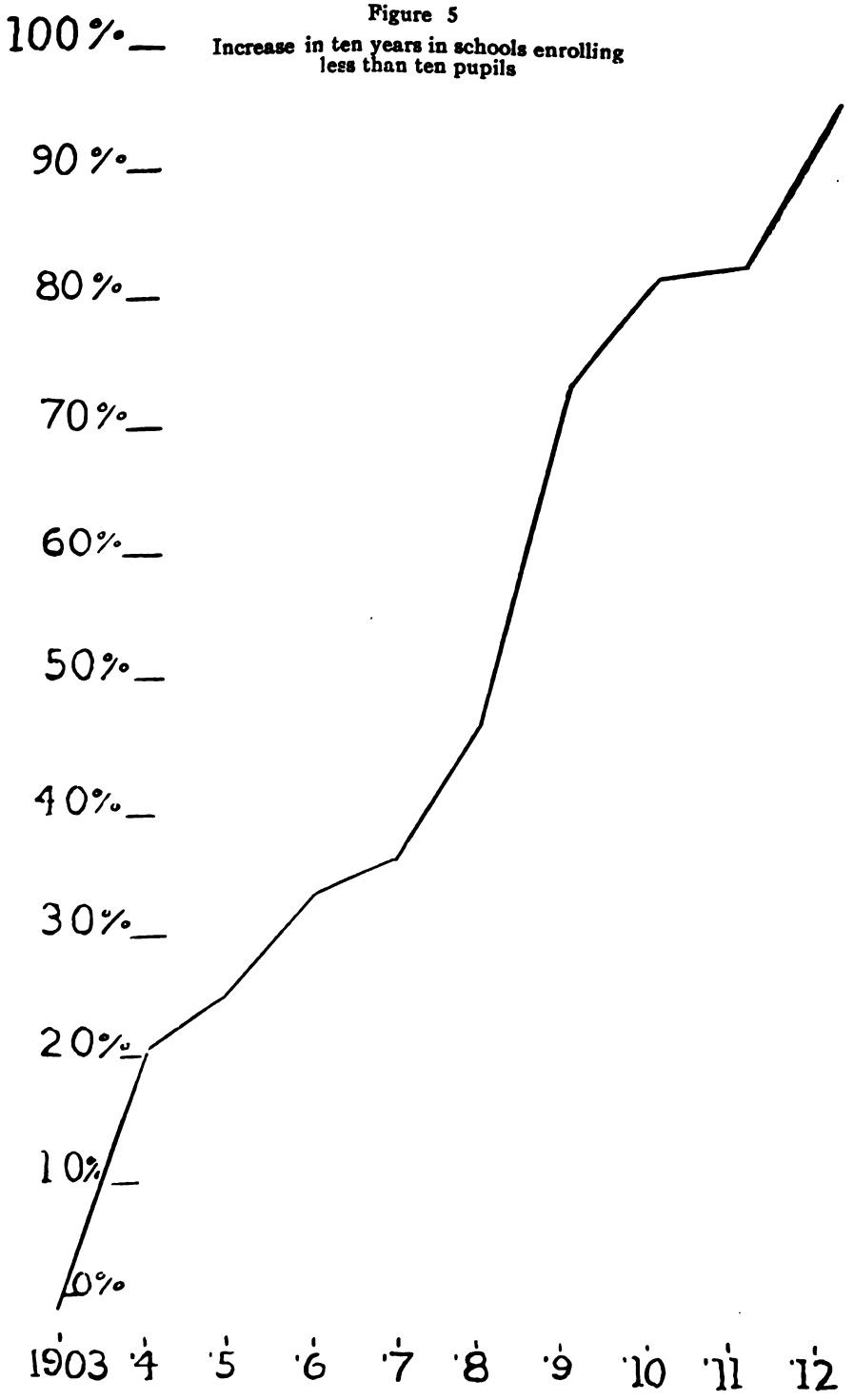
[16] *Eighteenth Biennial Report, State Superintendent of Public Instruction*, 13. See also Appendix.

[17] Italics are the author's.

[18] *Revised Statutes of Indiana*, 1914 sec. 6422.

Figure 5

Increase in ten years in schools enrolling less than ten pupils



This condition presents a very serious situation. There ought to be ıny less ten-pupil schools in the entire state of Minnesota, even though ; state is not yet fully developed. That this type of school has practically ıbled in numbers in ten years and is near the four hundred mark is a ıdition that should demand immediate attention.

There are four possible reasons for this increase. These reasons are:

I. Development of previously unsettled portions of the state into sparsely settled regions.

II. Shrinkage of rural population in previously developed portions of the state.

TABLE XLIX

PER CENT OF CHANGES IN POPULATION IN THIRTY-FOUR COUNTIES OF MINNESOTA BETWEEN 1900 AND 1910[10]

COUNTY	TOTAL DECREASE	RURAL DECREASE
	Per cent	Per cent
Blue Earth	9.1	12.4
Carver	.5	.5
Dodge	9.3	9.3
Douglas	1.6	4.0
Faribault	9.5	9.5
Fillmore	9.1	9.1
Freeborn	*	7.2
Goodhue	*	4.3
Houston	7.2	7.2
Jackson	2.0	2.0
Kandiyohi	*	1.2
Le Sueur	8.0	8.0
McLeod	4.6	4.6
Mahnomen	.02	.02
Meeker	4.1	4.1
Mower	*	7.0
Murray	1.3	1.3
Nicollet	4.4	5.0
Norman	.02	.02
Olmsted	2.7	10.0
Otter Tail	*	.4
Polk	*	7.4
Renville	2.4	2.4
Rice	.6	9.0
Scott	1.7	1.7
Sibley	7.8	7.8
Steele	2.3	4.3
Stevens	4.9	4.9
Swift	4.1	4.1
Wabasha	2.0	6.3
Waseca	8.8	10.7
Watonwan	1.0	1.0
Winona	6.4	7.2
Wright	3.7	3.7

* Increase of less than 5 per cent.

[10] *Thirteenth Report of the United States Census* 2:962.

III. Migration of rural school population to village or urban school enrollment.

IV. Special state aid to rural schools.

I. Let us consider the first possible influence, that of populating previously undeveloped parts of the state. Very fortunately for this study the decade included in the last report of the Federal Census overlaps seven of the years above included. The census covers the years between 1900 and 1910, and this study, the school years 1903-04 to 1912-13 inclusive. Comparisons of items covering these two periods can thus be made and conclusions can be drawn concerning items or factors present throughout the two periods.

According to the census report, thirty-four, or 43 per cent, of the counties in Minnesota decreased in rural population in the decade between 1900 and 1910.

Nineteen of these thirty-four, or 24 per cent of all the counties, decreased in total population. Of the remaining forty-five counties, six showed, in spite of rural shrinkage, slight increases in their respective totals. Above is an alphabetical list of the thirty-four counties and the percentages of changes both in total and in rural population for each county.

TABLE L

DISTRIBUTION OF PER CENT OF DECREASE IN POPULATION IN THIRTY-FOUR OF THE COUNTIES OF MINNESOTA BETWEEN 1900 AND 1910

PER CENT OF DECREASE	NUMBER OF COUNTIES
Less than 1 per cent	4
1 to 1.99	4
2 " 2.99	2
3 " 3.99	1
4 " 4.99	7
5 " 5.99	1
6 " 6.99	1
7 " 7.99	6
8 " 8.99	1
9 " 9.99	4
10 " 10.99	2
11 " 11.99	0
12 " 12.99	1

Twenty-seven counties in the state show more or less noticeable increase in the number of less-than-ten-pupil schools between 1903-4 and 1912-13. Below is an alphabetical list of these counties showing:

First, increase in number of smallest division of rural schools.

Second, per cent of decrease or increase of rural population in the counties.

TABLE LI

CHANGES IN RURAL SCHOOLS AND IN RURAL POPULATION IN TWENTY-EIGHT COUNTIES OF MINNESOTA BETWEEN 1900 AND 1910

COUNTY	NUMBER OF 10-PUPIL SCHOOLS		CHANGES IN RURAL POPULATION FROM 1900 TO 1910
	1903-04	1912-13	
			Per cent
Blue Earth	6	11	minus 12.4
Clearwater	0	4	plus 50.
Cottonwood	1	10	" 5.
Crow Wing	3	16	" 15. to 25
Dakota	10	12	" 5.
Dodge	2	5	minus 9.3
Fillmore	11	12	" 9.1
Goodhue	4	10	" 4.3
Grant	0	4	plus 5.
Houston	2	8	minus 7.2
Hubbard	2	14	plus 25. to 50
Jackson	2	4	minus .2
Le Sueur	3	7	" 8.
Marshall	0	5	" .02
Morrison	2	12	plus 5. to 15
Mower	7	12	minus 7.0
Norman	2	9	" .02
Otter Tail	1	4	" .4
Pine	1	3	plus 5.
Polk	2	13	minus 7.4
Red Lake	2	3	plus 15. to 25
Rock	0	5	" 5.
Sherburne	0	5	" 5. to 15
Todd	0	8	" 5.
Waseca	6	8	minus 10.7
Wabasha	10	15	" 6.3
Winona	5	8	" 7.2

This distribution shows the relation between change in percentage of rural population and increase of less-than-ten-pupil schools. It is true that Hubbard and Crow Wing counties, with marked population increase, experienced a large growth in the number of such schools. But Morrison, Cottonwood, Rock, and Todd, each with small population growth, gained markedly in the same size schools; while Dakota, with little gain, but a well settled county, has almost as many such schools as either of the first two.

We must conclude, then, that if opening new land and settling the frontier part of the state has had any influence in the increase of the practical doubling in the number of less-than-ten-pupil schools in the last decade, that influence has been meager and localized.

II. What influence upon the number of these schools has shrinkage of rural population had? Table LII shows that this factor has had an even less marked influence than population increase. No county had lost in 1912 as much as thirteen per cent of the rural population it had ten years before, while five had gained more than this in the same period.

All but four of the decreases occurred south of a horizontal line drawn on the map through Minneapolis. Of those four, one was seven per cent, but no one of the rest was as much as one per cent. The population shrinkage has then been small, and has occurred almost altogether in the thickly populated counties.

These facts force us to conclude that the factor of shrinkage in rural population does not materially assist in explaining the great increase in small schools.

TABLE LII

TABLE LI ARRANGED AS ARRAY OF PERCENTAGE OF RURAL POPULATION CHANGES

County	Population Changes		School Changes
	Increase	Decrease	
	Per cent	Per cent	
1. Clearwater	50		0 to 4
2. Hubbard	25 to 50		2 " 14
3. Crow Wing	15 " 25		3 " 16
4. Red Lake	15 " 25		2 " 3
5. Morrison	5 " 15		2 " 12
6. Sherburne	5 " 15		0 " 5
7. Cottonwood	5		1 " 10
8. Dakota	5		10 " 12
9. Grant	5		0 " 4
10. Pine	5		1 " 3
11. Rock	5		0 " 5
12. Todd	5		0 " 8
13. Marshall		.02	0 " 5
14. Norman		.02	2 " 9
15. Jackson		.2	2 " 4
16. Otter Tail		.4	1 " 4
17. Goodhue		4.3	4 " 10
18. Wabasha		6.3	10 " 15
19. Mower		7.0	7 " 12
20. Houston		7.2	2 " 8
21. Winona		7.2	5 " 8
22. Polk		7.4	2 " 13
23. Le Sueur		8.0	3 " 7
24. Fillmore		9.1	11 " 12
25. Dodge		9.3	2 " 5
26. Waseca		10.7	6 " 8
27. Blue Earth		12.4	6 " 11

III. The third possible reason mentioned was migration of rural school population to urban school enrollment. Above is shown the number of grade schools and the number of high schools in each of the twenty-seven counties in discussion in 1903, and the number of new schools added in each county by 1912.[20]

[20] A school transferred from the list of graded to high schools within this time is not counted as new if it was on the graded list in 1903. Only schools named in 1912 that were not named in either list in 1903 are counted in the list of those added,—that is, as new schools.

TABLE LIII

CHANGES IN SCHOOLS BY COUNTIES

COUNTIES	GRADED SCHOOLS 1903	HIGH SCHOOLS 1903	SCHOOLS ADDED NOT LATER THAN 1912	CHANGES IN RURAL SCHOOLS 1903-1912
Crow Wing	0	1	0	3 to 16
Clearwater	0	0	0	0 " 4
Dodge	3	4	0	2 " 5
Houston	3	1	0	2 " 8
Hubbard	1	0	0	2 " 14
Jackson	0	2	0	2 " 4
Le Sueur	2	2	0	3 " 7
Marshall	1	1	0	0 " 5
Pine	0	0	0	1 " 3
Red Lake	0	1	0	2 " 3
Waseca	0	3	0	6 " 8
Goodhue	0	4	1	4 " 10
Mower	3	3	1	7 " 12
Winona	0	2	1	5 " 8
Cottonwood	2	1	2	1 " 10
Dakota	1	2	2	10 " 12
Polk	2	4	2	2 " 13
Rock	0	1	2	0 " 5
Wabasha	1	3	2	10 " 15
Blue Earth	2	3	3	6 " 11
Fillmore	2	5	3	11 " 12
Grant	0	2	3	0 " 4
Morrison	0	1	3	2 " 12
Norman	2	1	3	2 " 9
Otter Tail	2	3	3	1 " 4
Sherburne	0	1	3	0 " 5
Todd	3	1	3	0 " 8

But what of the graded and high schools already existing? Did they receive any increase in the number of children from rural districts?

We are able to give only a partial answer.

Sixteen schools were transferred from the graded to the high school list in these years and a total of thirty-four near schools were added. In no county was there any addition where there had been neither a graded nor high school before.

Three counties added 1 school
Five " " 2 schools
Seven " " 3 "

The distribution of these additions does not indicate any clearly marked relation between the above additions and the increase in small rural schools. The annual reports of the state inspector of high schools divide the high school enrollment between those residing in the district and those enrolling from outside. The following figures show what per cent have come from outside districts for nine of the years under discussion.

TABLE LIV

PER CENT OF HIGH SCHOOL ENROLLMENT FROM OUTSIDE[21]

YEARS	PER CENT OF OUTSIDE ENROLLMENT (MEDIAN)
1904-05	14.2
1905-06	14.3
1906-07	14.3
1907-08	14.6
1908-09	15.2
1909-10	16.0
1910-11	16.4
1911-12	16.2

Similar figures are not available for graded schools.

From the above data one is not justified in drawing the conclusion that the presence and increase in the number of high schools may not have been a factor in the number of small rural schools. On the other hand, one would be far from justified in concluding that the small rural school situation for the state has been materially affected by this factor.

IV. The fourth possible factor named as influencing this situation is state aid. There are two reasons why this appears as even a possibility. In the first place, we have already found out that state aid to the single-room school tends to reimburse the tax payers of the district for running their school. They accept the gift, pay no perceptibly higher salary to their teacher, have no more days attendance to the credit of their register, and have a smaller school tax to pay. The implication is strong that the school is about the same kind of a school as before the state helped, only the patron pays a little less for its up-keep.

But secondly, the small school is an expensive one, per capita. To offset this expense there must be some counteracting incentive toward its continued maintenance. A part of such incentive is present in the very conservatism of the patron.[22] He wants things to go on as they have gone in the past. Add to this conservatism the knowledge by the conservatist that the state for a slight consideration stands ready to pay him to keep up old conditions, and the incentive is not only fostered, but the rural patron feels that his commonwealth sanctions his stand and gives him, so far as he is concerned, as high an endorsement as he can receive.

The influence of the state aid upon the small school as compared with the typical rural school of the state is shown more clearly by a comparison of items in the following table, based on 1,185 schools from the fourteen counties included in this study.

[21] This is for all high schools receiving state aid. Data are computed from annual reports of state high school inspector.

[22] See *Rural Life and Education*, 167, *et seq.*

TABLE LV

Schools Having an Enrollment of	I Number of schools	II Enrollment	III Attendance per pupil per year	IV Cost per pupil per day	V Special school tax
			Days		Mills
Less than 10 pupils	46	7	96.5	50.7c	7.6
From 10 to 20 pupils	282	15	95.6	30.4c	8.1
From 20 to 30 pupils	478	24	101.7	22.3c	5.8
From 30 to 40 pupils	281	32	104.0	17.8c	6.3
More than 40 pupils	98	43	100.1	13.4c	4.9

The figures in Column I are absolute. The figures in Columns II, III, IV, and V are medians. The meaning of the table becomes clear when we read,—The schools enrolling less than 10 pupils are 46 in number; they have a median enrollment of 7 pupils each; their pupils attend 96.5 days each during the year; each pupil costs his district 50.7 cents each day he attends and each district levies a special school tax of 7.6 mills on its assessed valuation to maintain its schools.

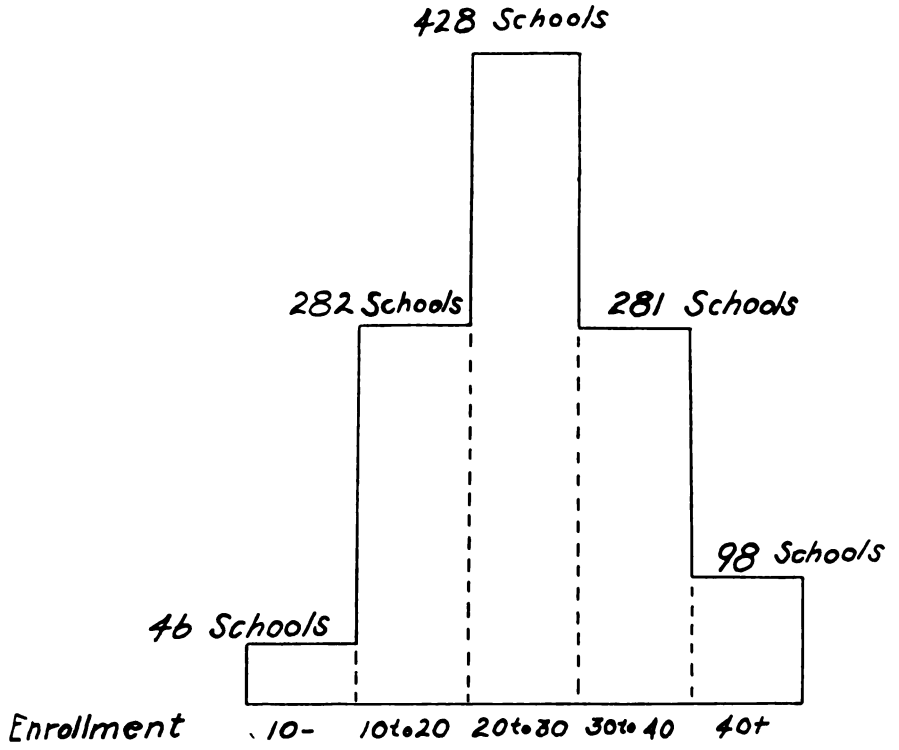


Figure 6
Distribution of 1,185 rural schools according to annual enrollment

The table discloses several interesting features. Column I shows quite a normal distribution of schools among the groups according to enrollment. This fact is shown even more clearly by Figure 6.

The "20 to 30" school is clearly the typical school.

The less-than-ten-pupil school costs about two-and-one-half times per pupil what the typical school costs. In the first group of schools, seven pupils cost their district $2.50 each, every week school is open; in the second group of schools twenty-four pupils cost their district $1.00 each per week.

The changes that have come into rural society and institutions in the past fifty years have been inimical to the rural institutions acclimated to former conditions. "Studies of the rural church problems have been made in the New England states, New York, Pennsylvania, Ohio, Illinois, Georgia, and other states. Everywhere the results are about the same. At the Michigan Rural Life Conference in 1911, it was stated that there were 10,000 dead rural churches in Illinois; 10,000 more about to die; and 500 already abandoned."[23] It is well asserted that rural schools would be suffering the same sort of hardship were it not for the resuscitating effect of state aid.[24] This is true of the rural situation as a whole. It is true to an intensified degree with the schools that are nearest the border of extinction through the operation of new social, industrial, and economic factors.[25]

After the consideration of the evidence offered, we may reasonably conclude that development of new parts of the state has doubtless been responsible for a few small rural schools; that shrinkage in rural population may have been responsible for a few, but if so, for a very few; that migration of school children from country homes to village schools has doubtless depleted country districts and assisted in some measure in making the small rural school; but as great a single factor as any has been the financial assistance which the state renders on conditions that tend positively toward the continuance of such schools.

Summary

The typical rural school of Minnesota is open 7.7 months each year, enrolls between 20 and 30 pupils, who attend 97.7 days each. Each pupil costs his district about 23 cents each day he attends school, 8.8 cents of which is paid by the state, while the district levies a tax of 1.7 mills on its true valuation to meet its share of the expense. The teacher in this school receives a wage of a little more than $51 per month.

[23] *Rural Life and Education* ch. 3.
[24] *Ibid.*, ch. 4.
[25] *Ibid.* See also *Constructive Rural Sociology.*

Effects of State Aid

State aid to rural schools has probably increased the length of the school year to some extent, but not so much as one is led to suppose by a cursory survey; it has not resulted in any increase in the number of days that children attend these schools; it has not increased enrollment; it has not been a factor in increasing teachers' salaries in these schools. Special state aid and current fund together have definitely resulted in the state's paying over two fifths of the cost of up-keep of the districts receiving such aid and by such reimbursement have resulted in the districts' being content to maintain educational standards little or none above the ones previously maintained; they have made the districts willing to accept state aid as a pecuniary endorsement of these educational standards and as a financial reimbursement to their own district treasuries. By encouraging the maintenance of the dwarf rural school, by having attached to its bestowal no conditions regarding enrollment, local taxation, local assessed valuation, and with extremely imperfect possibilities of checking whether the conditions presumed to be met have been met, state aid as it is at present distributed to the rural schools of Minnesota acts positively as a barrier to the advancement of the best interests of these schools and their patrons.[26] It is educationally pauperizing the rural schools of the state.

TABLE LVI

Rural School Summary

Item	Median	Quartiles	
Annual attendance per pupil	97.9 days	81 days	112 days
Cost per pupil day	22.9 cents	17.08 cents	31.86 cents
Aid per pupil day	8.8 cents	6.2 cents	9.5 cents
Per cent state aid is of total annual income	37.2 per cent[27] 46 per cent[28]	25.7 per cent	45.5 per cent
Local tax levy	1.7 mills[27] 1.4 mills[28]	1.1 mills[27] .9 mills[28]	1.58 mills[27] 2.00 mills[28]
Assessed valuation per pupil	$2,195	$1,321	$3,273
Length of school year	7.7 months	6.9 months	7.8 months
Monthly salary of teacher	$51.14	$45.63	$56.30

[26] *Cf.* Betts, *New Ideals in Rural Schools* ch. 1.
[27] Item for 1,011 districts.
[28] Item for 461 districts.

CHAPTER VI

SPECIAL AID TO HIGH, GRADED, AND RURAL SCHOOLS COMPARED

In Chapters III, IV, and V, the facts for high, graded, and rural districts, respectively, have been set forth. All the factors discussed have not been identical for all the three groups. Seven, though, have been studied for each group of schools. They have to do with: (1) length of the school year; (2) attendance; (3) unit cost; (4) unit aid; (5) gross proportion of aid; (6) local school tax levy; and (7) assessed valuation.

The purpose of this chapter is to make direct comparisons among the three classes of schools. This will be done first for each of the above named items: (1) by reproducing from the three preceding chapters the medians and quartiles of the distributions for each item, and (2) by showing graphically on the same base the complete (100 per cent) distribution of each item for each of the three groups of schools.

TABLE A

LENGTH OF SCHOOL YEAR IN MONTHS

School	Median	Quartiles	
High	9	*	*
Graded	9	*	*
Rural	7.7	6.9	7.8

* Negligible in amount.

No attempt is made to determine variations from the central tendency among either high or graded school systems in the length of the school year. The law requires schools receiving special aid in either of these groups to be in session at least nine months.[1] Very few have longer sessions. All rural schools classed as semi-graded, and Classes A and B of the common schools must have eight months of school.[2] Those in Class C may have seven months.[3] The general conditions among rural schools as compared with high and graded seems to be that they have from one to two months less of school per year than either high or graded districts. About 75 per cent of the rural schools have at least eight months of school but only a little more than 19 per cent have as much as nine months, or what is required of the high and graded schools.

The amount of assessable property which a district possesses for every child within its schools represents the district's dynamic resources for

[1] See Chapter 2.
[2] *Ibid.*
[3] *Ibid.*

educating that child. The only place where such a statement should be modified for the sake of comparative justice would be in large cities. Since none of them are included in these calculations this is a true statement for the groups of districts involved.

TABLE B

ASSESSED VALUATION PER ENROLLED PUPIL

School	Median	Quartiles	
High	$1,186	$ 937	$1,610
Graded	1,254	1,034	1,582
Rural	2,195	1,321	3,273

The total taxable resources of one district may be considerably higher than those of another. The only fair method of comparing the two is to measure each in terms of the potential draw upon the resources. The number of children actually presenting themselves for the public schools to educate is one measure of such draw.

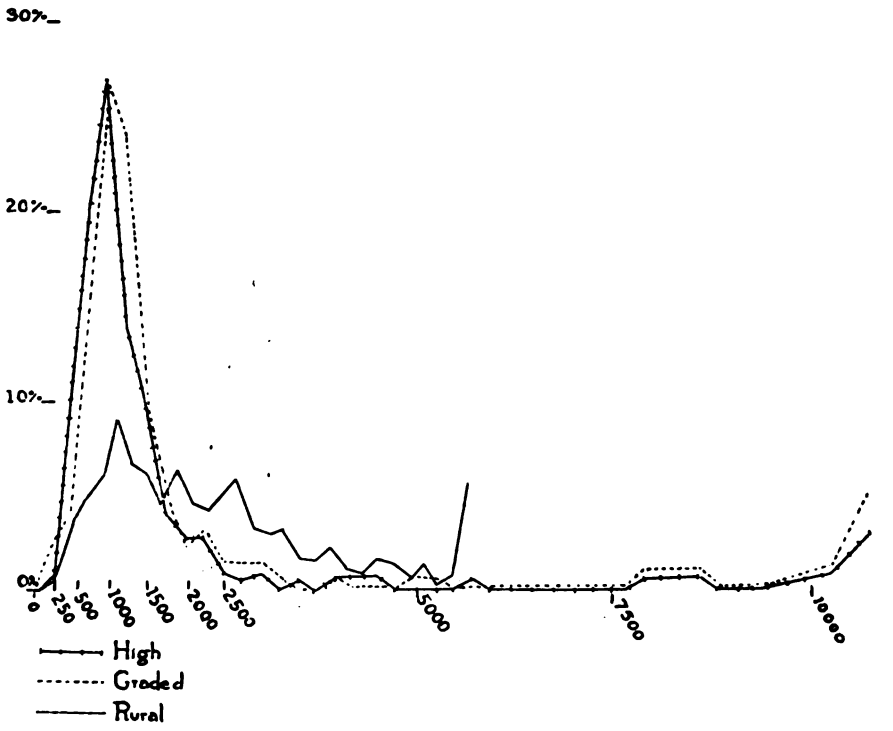


Figure 7
Assessed valuation per enrolled pupil

When the three groups of schools are compared on this basis most striking facts appear. The financial resources of these three groups are in reverse order to the ranking type of schools they represent. The valuation in rural districts puts at their disposal almost twice the median taxable property for every child in their schools that high school districts possess. The lowest quartile of rural valuation is higher than the median for either high or graded districts. The assessed valuation per pupil in graded school districts is less than $100 more than such valuation in high school districts; it is, however, $900 less than such valuation in rural districts. The variability in this item is considerably greater among high and graded than among rural schools.

The median valuation for rural districts might be less if a larger number of districts had been taken. It does not seem, though, as if that change would materially affect the figure. The selection made was a random selection among the 1,011 districts in the order of the numbers assigned them in their respective counties upon their organization. Here is basis for a complete reversal of the judgment that rural districts are economically not so able to support good schools as municipal and village corporations. The truth is that they are on the whole twice as able in Minnesota to spend any given amount, for every child attending their schools, as are the two other groups here represented.

Compared with the other groups of schools, rural schools are by far the wealthiest in financial resources for educative purposes. Yet, as we have already seen, the annual length of possible school attendance which they offer their children is the shortest.

TABLE C

ATTENDANCE PER PUPIL IN DAYS PER YEAR

School	Median	Quartiles	
High	147.4	142.4	154.4
Graded	138.7	128.6	147.2
Rural	98.0	81.0	112.4

Inasmuch as the rural school year is shorter than the year in either of the other classes of schools we would expect the children of the rural schools to attend fewer days each per year. The above comparison shows such expectation to be correct. But though high and graded districts have practically the same length of school year, their children do not give the same response of attendance. The median attendance of children in high school districts is 62 per cent of the total possible attendance, 180 days; in graded, it is 77 per cent; and in rural, it is 64 per cent of the median length of the school year. These per cents represent a measure of re-

sponse to educational privilege offered. Since the privileges are different 64 per cent can not be compared absolutely with 77 per cent or with 82 per cent. If the corresponding quality of educational privilege now given to the groups responding 82 per cent were given to the groups responding 64 per cent the latter might rise above 82 per cent. There is no basis therefore for an absolute comparison of the measure of response to the same thing or to equivalent things.

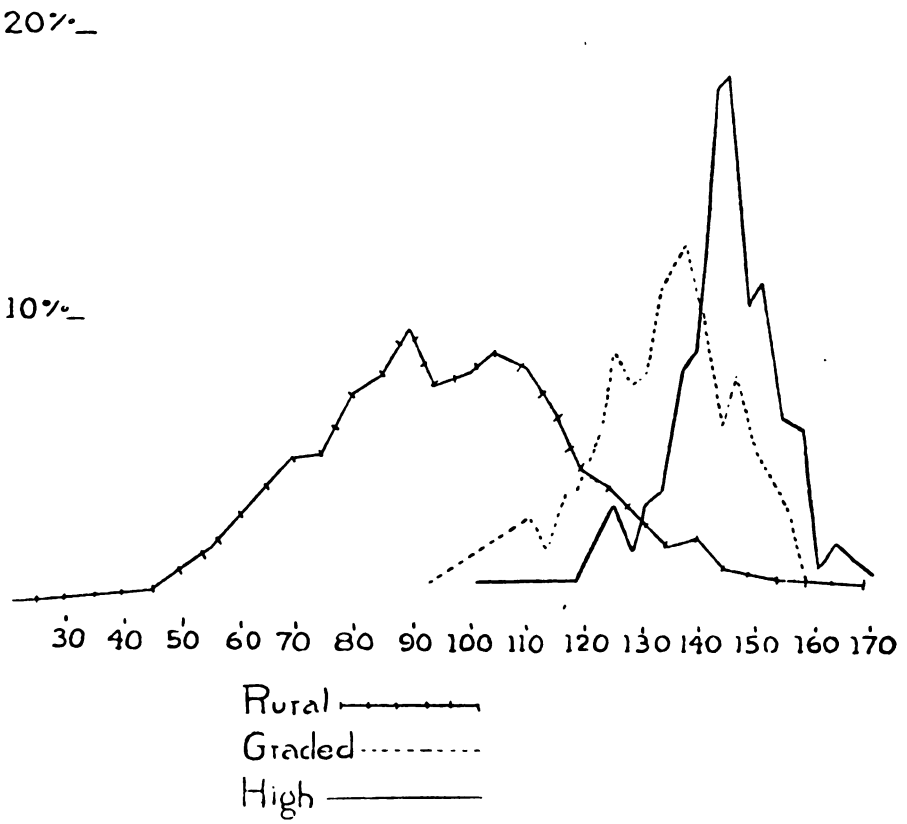


Figure 8
Pupil attendance in days per year

On the other hand this is a definite measure of school attendance, 53 per cent of the rural schools have an average attendance of less than 100 days per pupil. This is a shorter attendance than any single high school district reports and less than all except one half of one per cent (one district) among the graded schools, report. That is to say, the child attending in a high or graded school district has double the chance of being at school

100 days a year that the child attending the rural school has. The corresponding chances for attending 120 days are not far from as great. Less than 16 per cent of the rural districts have such attendance, while 93 per cent of the graded and 99 per cent of the high have it.

It is quite as interesting to note that the highest extreme of rural school attendance exceeds any graded district and practically equals the best high school district.

TABLE D

COST PER PUPIL PER DAY IN CENTS

School	Median	Quartiles	
High	25.7	21.5	29.9
Graded	23.0	19.4	28.7
Rural	22.9	17.1	21.9

The actual time-unit cost rank is in the order corresponding to the types of schools. At the same time there are small differences in this item among the schools. There is practically no difference between the median cost for graded and for rural schools. The range of variability is even more striking. Costs in rural schools reach the highest extreme both in the quartile and in actual cases. There are several possible reasons for this condition. It is but consistent with what has already been shown to suppose that small enrollment plays its subtle part in high unit cost in rural schools.

The cost is less than 30 cents a day in 70 per cent of the rural districts, in 75 per cent of the high, and in 80 per cent of the graded. It is less than 20 cents in 38 per cent of the rural, in 14 per cent of the high, and 21 per cent of the graded. Though rural schools have the greatest variability they also have the most strongly marked central tendency.

TABLE E

AID PER PUPIL-DAY IN CENTS

School	Median	Quartiles	
High	7.5	6.1	9.8
Graded	7.1	6.4	8.4
Rural	8.9	6.2	9.5

A very interesting item in this connection is how state aid, computed on the time or attendance unit base, compares with the actual cost on the same basis. We are at once struck with the lack of conformity in this respect. Rural districts receive a median amount of the most per unit, more even than high school districts and the quartiles reinforce the story

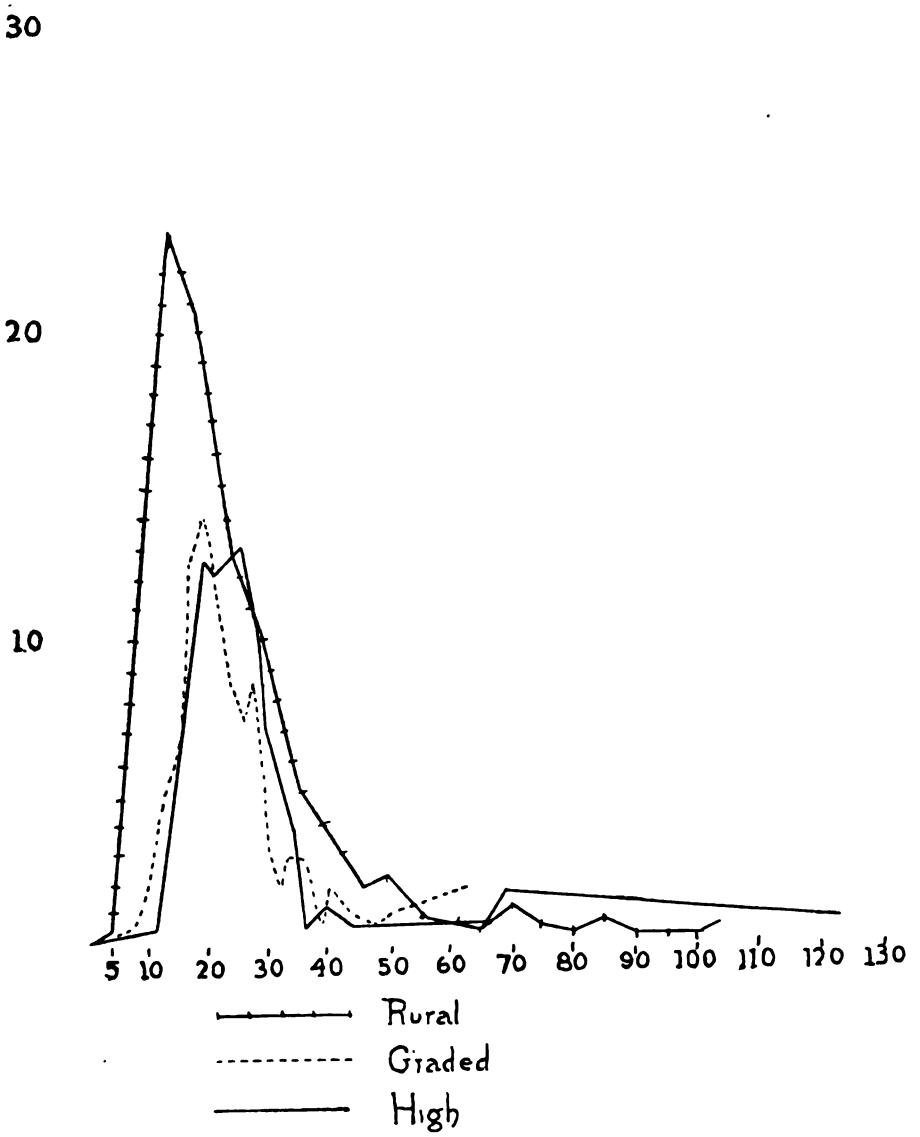


Figure 9
Cost per day of attendance per pupil

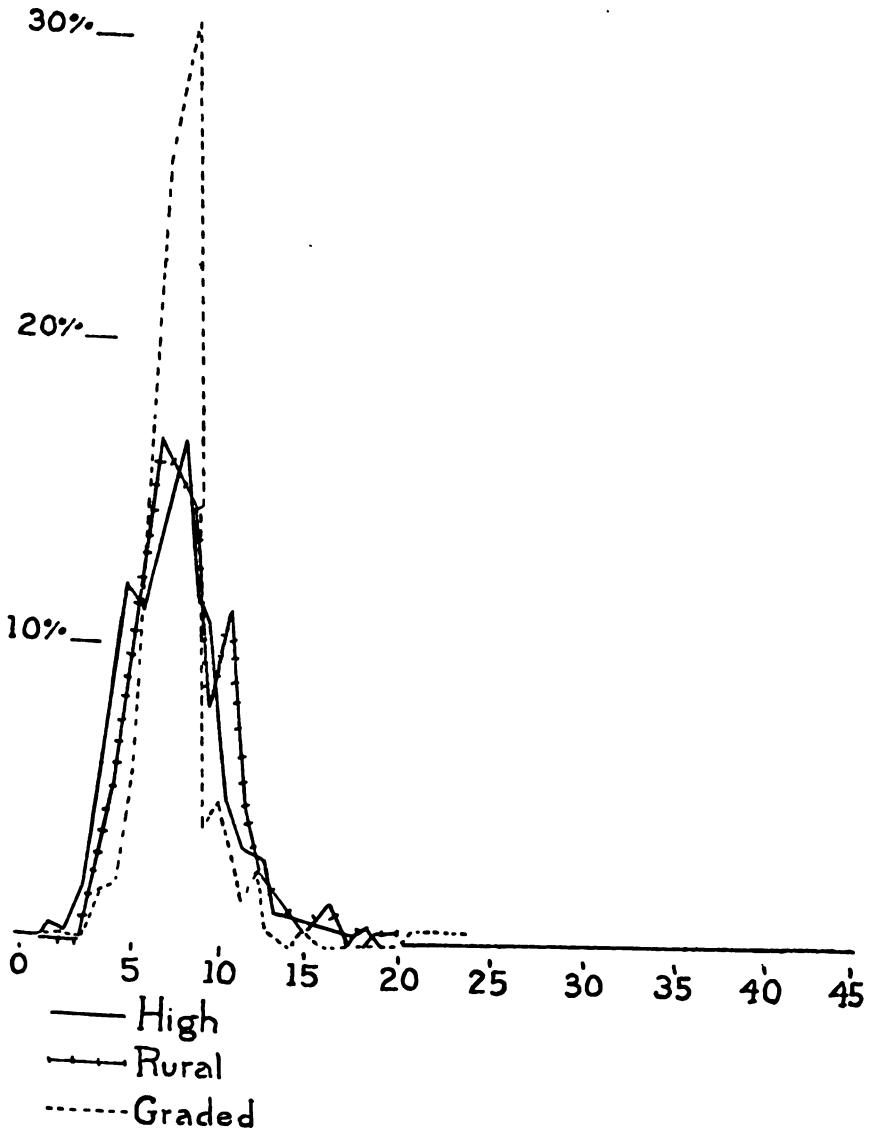


Figure 10
Aid per day of attendance per pupil

which the medians tell. Graded and high schools are close together with the high in the lead both in median aid received and in the variability of aid.

In 25 per cent of the rural districts the aid is 10 cents or more. Twenty-four per cent of the high school districts and 11 per cent of the graded districts receive similar aid.

These findings should be compared with those of what proportion state aid is of the total annual income of the district.

TABLE F

PER CENT OF STATE AID PER YEAR

School	Median	Quartiles	
High	32.2	25.3	37.8
Graded	33.0	27.6	38.4
Rural (1,011)	37.2	25.7	45.5
(461)	46.0	38.4	52.9

In the per cent of total maintenance income which is received from state aid, high and graded school districts are very similar both in central tendencies and in quartiles. Again they are outdone by rural districts. Among the 1,011 districts this proportion is between one sixth and one seventh more than for either of the other groups. But in this item comparison should be made rather with the 461 districts. They receive more than one and two fifths what high school districts do, and almost that many times what the graded districts receive.

Of the 1,011 rural districts one fifth receive from the state 50 per cent or more of their annual income, and more than one third of the 461 districts receive a similar share. Only between 4 per cent and 5 per cent of the graded and less than this proportion of the high school districts are given as much. Twenty-two per cent of the 1,011 districts receive less than 25 per cent from the state. Nearly 27 per cent of the graded and nearly 30 per cent of the high school districts receive less than 25 per cent. Between 75 per cent and 80 per cent of the 461 districts receive more than one half the amount they themselves contribute. Only 49 per cent of the graded schools and 55 per cent of the high schools receive as much.

TABLE G

LOCAL TAX LEVY IN MILLS

School	Median	Quartiles	
High	6.3	5.0	7.8
Graded	5.1	3.9	6.0
Rural (1,011)	1.7	1.1	1.6
(461)	1.4	.9	2.0

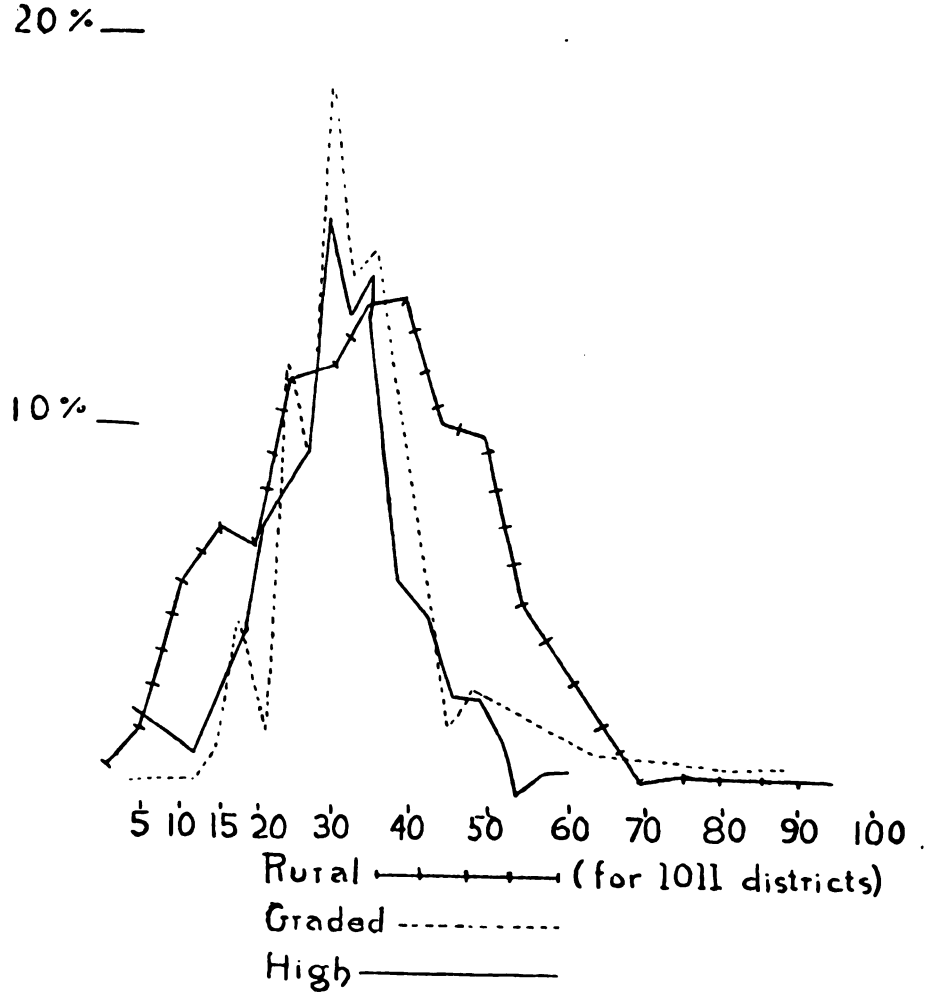


Figure 11
Per cent that state aid is of total maintenance income

With cost per attendance-day less, with the days of attendance less, with the aid for every such day more, and with taxable resources almost twice that of the other districts, rural districts ought not to have high tax levies. The above table shows clearly that they do not. Both this table and Figure 11 loudly acclaim the extremely low rural school tax. The rural schools' year is less than eight ninths of the year of all the other districts; their resources are twice as great; but their taxes are one third and less than one fourth, respectively, of what graded and high school districts' taxes are. Their lowest quartile is less than one half the lowest quartile of the grade school levies and less than one third the lowest quartile of high school levies.

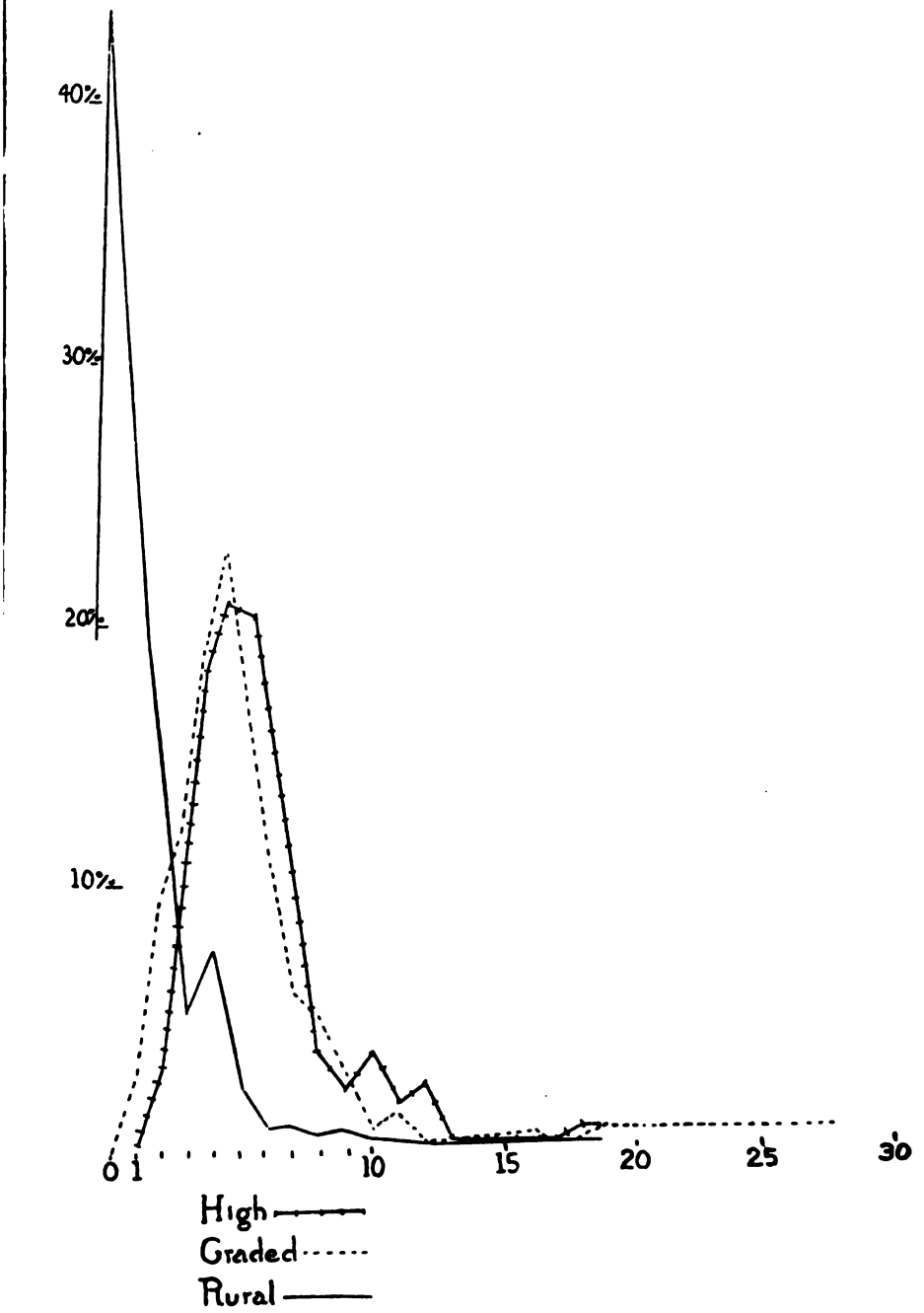


Figure 12
Local tax levy

Among all the rural districts considered, 84 per cent have a tax amounting to less than 3 mills, while among the 461 districts 89 per cent have taxes corresponding. Only six high school districts (3 per cent of all) and 12 per cent of the graded school districts have taxes as low. Ninety-seven per cent of the 1,011 districts and 99.2 per cent of the 461 districts levy less than 6 mills; 30 per cent of the graded school districts and 47 per cent of the high school districts have taxes above such a levy. Finally, 44 per cent of the 1,011 districts levy a two-mill tax, while *73.7 per cent of the 461 districts levy less.* This is less than the tax of any single high school district. Nearly three fourths of the rural districts that receive special state aid levy a tax less than the lowest tax levied by any of 197 high school districts:

TABLE LVII

SUMMARY

COMPARISON OF IDENTICAL ITEMS AMONG HIGH, GRADED, AND RURAL SCHOOLS IN TERMS OF THE MEDIANS

School	A Length of school year	B Assessed valuation per pupil	C Yearly attendance per pupil	D Cost per pupil-day of attendance	E Aid per pupil-day of attendance	F Per cent income from state aid	G Tax levy
	Months		Days	Cents	Cents		Mills
High.....	9	$1,186	147.4	25.7	7.5	32.2	6.3
Graded.....	9	1,254	138.7	23.0	7.1	33.0	5.1
Rural.....	7.7	2,195	98.0	22.9	8.9	37.2*	1.7*
						46.02†	1.4†

* For the 1,011 districts.

† For the 461 districts.

In this list of seven common factors the pecuniary advantage is in favor of the rural districts as against the other schools in each of all the five items possible, that is in: (B) assessed valuation per pupil; (D) cost per pupil per day of attendance; (E) aid per day of attendance; (F) total per cent of income derived from state aid; and (G) tax levy in mills. The school year is the shortest and the number of days attended per pupil is the least among rural districts.

On the basis of need and effort the rural districts are getting the lion's share of state aid. Rural districts have more to do with, and still do less for, their children than either of the other two groups of districts. The children of the rural schools, in spite of the financial ability of their districts, are offered less school opportunities per year, and take a smaller proportion of what is offered, than the children of the other districts. The actual schooling which rural children take costs a little less per time unit and is paid for in greater part by the state than the schooling taken by children in the other schools. Rural districts exert themselves much less to maintain their schools, yet in spite of this fact they are reimbursed

far more by the state than other school districts. Very plainly state aid bears no relation to local need, local effort, or local ability in rural districts, at least.

From a consideration of these facts three fundamental propositions are evident:

1. The rural districts, as a group, are nearly twice as able financially to provide educational opportunities for their children, as any other group of districts.
2. In every feature of educational opportunity and advantage on which there is definite evidence, rural districts provide educational opportunities greatly inferior to those offered by other districts.
3. The rural districts receive in special aid from the state a very much larger per cent of their total income than does either of the other groups of schools.

Proposed Scheme for Distribution of State Aid

The investigation so far has led to certain definite conclusions. On the basis of these conclusions the writer submits certain principles as a practical basis to govern the distribution of state aid.

In stating these principles the writer recognizes that their application would be most efficacious under the administration and supervision of a State Board of Education possessing large executive powers and whose administrative functions should be exercised through an expert executive agent.

I. General Principles

1. All state aid should be given only upon definite recommendation of duly authorized state officials who are the executive agents of the state board.

2. No aid should be granted to any district for any purpose before the state has duly inspected the work for which state aid is requested and has ascertained that work meriting state aid has been carried on for at least one year previous to the time that aid is granted.

3. The state board should maintain a bureau to ascertain and to measure the results of the policy of state aid to public education. This bureau should seek constantly to discover undesirable or questionable results arising from the distribution of state aid and should suggest and devise improved methods for the distribution of such aid.

4. The state board should have power:
   a. To set standards and stipulate conditions prerequisite to state aid, in all its forms.
   b. To appoint the necessary number of executive agents to insure the proper administration of the powers and duties of the board, and to direct the work of such officials.
   c. To direct the work of the Bureau of Investigation.
   d. To make individual grants of aid in all forms to districts, and for just cause to withhold the grant of any such aid.

II. Principles to Govern State Aid to Elementary and Secondary Schools

1. There should be a flat sum granted to every high and graded school, meeting the stipulated requirements of the state board. The basis of such aid should be the number of teachers actually employed, except that the aid for schools employing only one teacher should be upon the basis of the number of schools maintained.

2. Every district maintaining high or graded schools should receive no additional state aid of any sort until it expends in a given year an amount per attendance unit in both its high and graded departments, equal to the median cost of such units among all schools of the same classification in the state; provided, that if, in order to raise such amount, a district should be obliged to levy a tax larger than the median tax among all schools of the same classification in the state, the state should refund to such district an amount equal to one half the income from the tax levy exceeding the median tax levy; and provided further, that should the tax levy necessary to raise the median attendance support be greater than that levied by three fourths of the districts in the same classification in all the state, then the state should refund to such district the whole of the amount raised by the second excess levy.

3. The state should give aid on the basis of every properly qualified teacher having in charge not over fifteen children who are physically defective or who are retarded three or more years. It would be necessary for the state to define what constitutes a physically defective or a retarded pupil.

4. Additional aid for consolidation should be granted on the basis of the unit cost of transportation of pupils actually conveyed. A consolidated school should be able to benefit also by any of the other aids provided by fulfilling the conditions prerequisite to the same.

5. There should be no aid granted to any one-room school whose total annual attendance falls below two thousand days—except in the case of districts that can prove to the satisfaction of the State High School Board that in addition to having met all other prerequisites for state aid, consolidation is impossible, and the school population of the district makes it impossible for such districts' annual attendance to total two thousand days when the school is operated at least eight months.

6. The State Constitution should be so amended as to allow the distribution of the permanent school fund income on the basis of attendance. If such amendment can not be readily secured, during the time previous to its passage the number of days of attendance requisite for participation in this aid should be raised to one hundred.

CHAPTER VII

SPECIAL AID TO INDUSTRIAL DEPARTMENTS

Some of the most puzzling questions connected with state aid to public schools arise in connection with the maintenance of special industrial departments.[1] When the Commission came to consider this problem they were confronted by a condition similar to that which they had found with respect to general aid to the three groups of schools. That is to say, although for some years generous aid had been granted to these several industrial departments,[2] it had not been granted on the basis of any specifically known or accurately determined amount of need. The two laws, as passed, were adapted to the solution of a real problem, but the limits of legitimate local demands were not known. No one knew the actual costs of the departments for which the laws were attempting to provide. This was no reflection upon anyone. Facts necessary for computing such costs were not at hand. The plan contemplated generous state aid for the work as it was planned, and by careful supervision attempted to check up the expenditures and thus obviate reckless and wasteful distribution.

The few years' operation of these laws and maintenance of the special departments thus aided ought to help in finding out what expenditures should legitimately be. To find out how the money expended was used, to ascertain as closely as possible the actual and relative costs of the several departments, should help in determining whether the aid provided had been giving expected or adequate returns.

The nature of the two acts providing special aid for industrial education should be recalled. To state them briefly, one allowed $2,500 annually to high or graded schools maintaining, according to prescribed conditions, the three departments of agriculture, shop work, and home economics. The other granted $1,800 annually to high or graded schools maintaining, according to prescribed conditions, a department of agriculture and a department of shop work *or* of home economics.[3] Important questions arising in this connection are:

1. Are $2,500 for three departments and $1,800 for two, fair distributions?
2. How much does a department of agriculture really cost?
3. How much does a department of shop work or one of home economics cost?

[1] Teacher Training Departments in high schools are not included in this discussion, except where specifically mentioned. The reason is that these departments are for the benefit of the state and not of the communities merely. The state recognizes this in attempting to pay *all* the special maintenance expenses of these departments.

[2] See Chapter 2.

[3] See Chapter 2.

4. How do salaries of instructors compare, both in the same department and between departments?

To be able to compare costs a common unit of measuring that cost must be used. The unit here chosen was that of the pupil-recitation of instruction, the number of pupils being determined according to the total enrollment in the class. The cost itself is for maintenance and includes: first, salaries of instructors; and second, the expense of current supplies. As has already been stated, the data covering these items were obtained, through the kindness of Mr. George B. Aiton, directly from the reports of the schools in which these departments were maintained the preceding year and which received special aid in conformity with the two legislative acts previously described.[4] The data in these reports constituted the basis for the distributions of the state aid to these departments by the State High School Board. For the purposes of this study, therefore, these data are as authentic as any that could be used.

TABLE LVIII

PLAN OF ORIGINAL DATA SHEET FOR COST OF HIGH SCHOOL INSTRUCTION

DEPARTMENTS AND COURSES	CLASSES						EXPENSES			
	Grade	Weeks	Hours per day	Times per week	Enrollment	Student hours per week	Salaries	Other direct	Total	Average cost per student hour
I. Agriculture	I	II	III	IV	V	VI	VII	VIII	IX	X
a. Crops.....										
b. Agronomy.....										
II. Home Economics										
a. Domestic Science, etc..										
III. Shop Work										
a. ——.....										
b. ——.....										

The accompanying sheet shows what information was used and how it was tabulated. The first column at the left is for the listing of departments and the courses offered in them. Column I shows the year in which these several courses were offered. Column II tells the number of weeks which the respective courses were taught; column III, the number of recitation periods per day devoted to the subject; column IV, the number of days per week which such recitations were held; column V, the enrollment in each course; column VI, is the product of the figures in columns II, III, IV, and V, and may be called the number of pupil-recitation periods each

[4] Twenty-eight high schools received $2,500 each, and 68, $1,000 each. See *Twentieth Annual Report of Inspector of State High Schools*, 52, 53.

course covered. In column VII is given the salaries of the instructors. Column VIII states the other direct expenses of maintenance for the year. Column IX is in each case the sum of the amounts in columns VII and VIII.

The figures in column X are obtained by dividing the amount in column IV by the sum of the figures for each separate department in column VI. Where the instruction covered two recitation periods daily, the two periods were counted as two. The problem here concerns the time unit cost of instruction of a given subject. If the conditions in two schools were such that a given subject occupied two periods of recitation time in one school and in the second school it occupied only one period, the first school is charged with twice the time cost for that subject; where the recitation period varied five minutes no account is taken of such variation, as between forty and forty-five minutes, otherwise it is reduced to a forty-five minute basis.

Salaries

Inasmuch as each school receiving aid under either of these acts was required to report upon the salary of its instructors in each department, the figures necessary seemed readily available. In some cases, however, the instructors in special departments gave a part of their time to teaching regular, that is, academic, high school work. On the other hand, some regular high school instructors devoted part of their time to teaching industrial subjects. The latter division of time was technically permissible by principals of graded schools and by superintendents of high schools receiving the $1,800 aid.[5] In either such exceptions, the person's salary was prorated. That part of it corresponding to the proportion of time devoted to teaching a given industrial subject was charged against the salary expense of the industrial department in which that subject was listed. In order to make the information covering such data accurate a lengthy correspondence was carried on with the superintendents and principals where these industrial departments had been maintained. No school was finally included in the list from which definite information was not received.

The median annual salary of fifty-eight teachers in shop work is $863, fifty per cent receiving between $759 and $1,074. Fifty-three of the fifty-eight receive less than $1,100 each.

The median annual salary of seventy-two teachers in home economics is $700, fifty per cent receiving between $624 and $774. Two thirds of all receive between $600 and $800.

The median annual salary of fifty-nine teachers in agriculture is $1,206,

[5] See Chapter 2, note 46.

TABLE LIX

SALARIES OF SPECIAL INSTRUCTORS

SALARY	NUMBER OF INSTRUCTORS		
	Shop Work	Home Economics	Agriculture
$400 to $499	0	1	0
500 " 599	3	11	0
600 " 699	4	24	0
700 " 799	12	24	0
800 " 899	9	5	0
900 " 999	11	2	4
1,000 " 1,099	6	1	7
1,100 " 1,199	3	1	4
1,200 " 1,299	5	0	23
1,300 " 1,399	1	1	7
1,400 " 1,499	1	0	4
1,500 " 1,599	1	1	6
1,600 " 1,699	0	0	3
1,700 " 1,799	0	1	1
1,800 " 1,999	1	0	0
2,000 " 2,199	1	0	0
	58	72	59

fifty per cent receive between $1,197 and $1,292; twenty-three, or nearly forty per cent, of them receive between $1,100 and $1,200 each.

Up to $900 over forty-eight per cent of the shop salaries are included, and over ninety per cent of the home economics salaries, but not one in agriculture. Less than eighteen per cent of the shop salaries and less than five per cent of the home economics salaries are equal to or above the median salary in agriculture.

After the salaries of instructors in industrial work had been ascertained, it seemed desirable to compare them with salaries of regular high school instructors. It would have been highly desirable could comparisons have been made directly between salaries by subjects in industrial departments and in specific academic departments. Such detailed comparisons could not be made on the basis of the facts known. The data available covering salaries of instructors of regular high school subjects could not be divided even by departments as could the data for the cost of industrial departments. On account of the size of most high schools in the state one instructor usually teaches several subjects, the classes of one department often being divided among several people. It was impossible to make any accurate division of salaries on the basis of time devoted to the teaching of given subjects in the various high schools.

The median annual salary of 789 teachers[6] in regular high school work, excluding superintendents, but including principals, is $725. The middle

[6] These are chosen from both classes of specially aided schools and from schools in neither of these classes.

one half of these individuals receive between $628 and $830. Seven hundred and sixty-five of the 789, or nearly 99 per cent, receive less than $1,200, the median salary of the agriculture teacher.

How salaries of special instructors compare with those in regular high school work in departments and work which receive no special departmental aid, is answered by reducing the distributions of Tables LIX and LX to a per cent basis and then comparing them, as shown in Table LXI.

TABLE LX

SALARIES OF REGULAR HIGH SCHOOL TEACHERS

NUMBER OF TEACHERS	PER CENT OF ALL TEACHERS	HIGH SCHOOL TEACHERS' SALARIES
1	.1	$400 to $499
110	13.9	500 " 599
251	31.8	600 " 699
194	24.5	700 " 799
117	14.8	800 " 899
56	7.1	900 " 999
19	2.4	1,000 " 1,099
17	2.1	1,100 " 1,199
13	1.6	1,200 " 1,299
9	1.1	1,300 " 1,399
0	.0	1,400 " 1,499
0	.0	1,500 " 1,599
1	.1	1,600 " 1,699
0	.0	1,700 " 1,799
1	.1	1,800 " 1,899

TABLE LXI

SALARIES OF ALL GROUPS OF HIGH SCHOOL INSTRUCTORS

SALARY	SHOP 58 teachers	HOME ECONOMICS 72 teachers	AGRICULTURE 59 teachers	HIGH SCHOOL 789 teachers
$400 to $499	.0	1.4	.0	.1
500 " 599	5.1	15.0	.0	13.9
600 " 699	6.8	33.3	.0	31.8
700 " 799	20.6	33.3	.0	24.5
800 " 899	15.5	7.0	.0	14.8
900 " 999	18.9	2.8	6.7	7.1
1,000 " 1,099	10.3	1.4	11.8	2.4
1,100 " 1,199	5.1	1.4	6.7	2.1
1,200 " 1,299	8.6	.0	38.9	1.6
1,300 " 1,399	1.7	1.4	11.8	1.1
1,400 " 1,499	1.7	.0	6.7	.0
1,500 " 1,599	1.7	1.4	10.1	.0
1,600 " 1,699	.0	.0	5.1	.1
1,700 " 1,799	.0	1.4	1.7	.0
1,800 " 1,999	1.7	.0	.0	.1
2,000 " 2,199	1.7	.0	.0	.0

Comparisons among the salaries in all these departments can best be made by means of a summarizing table, and by curves plotted on the same base on a percentage distribution.

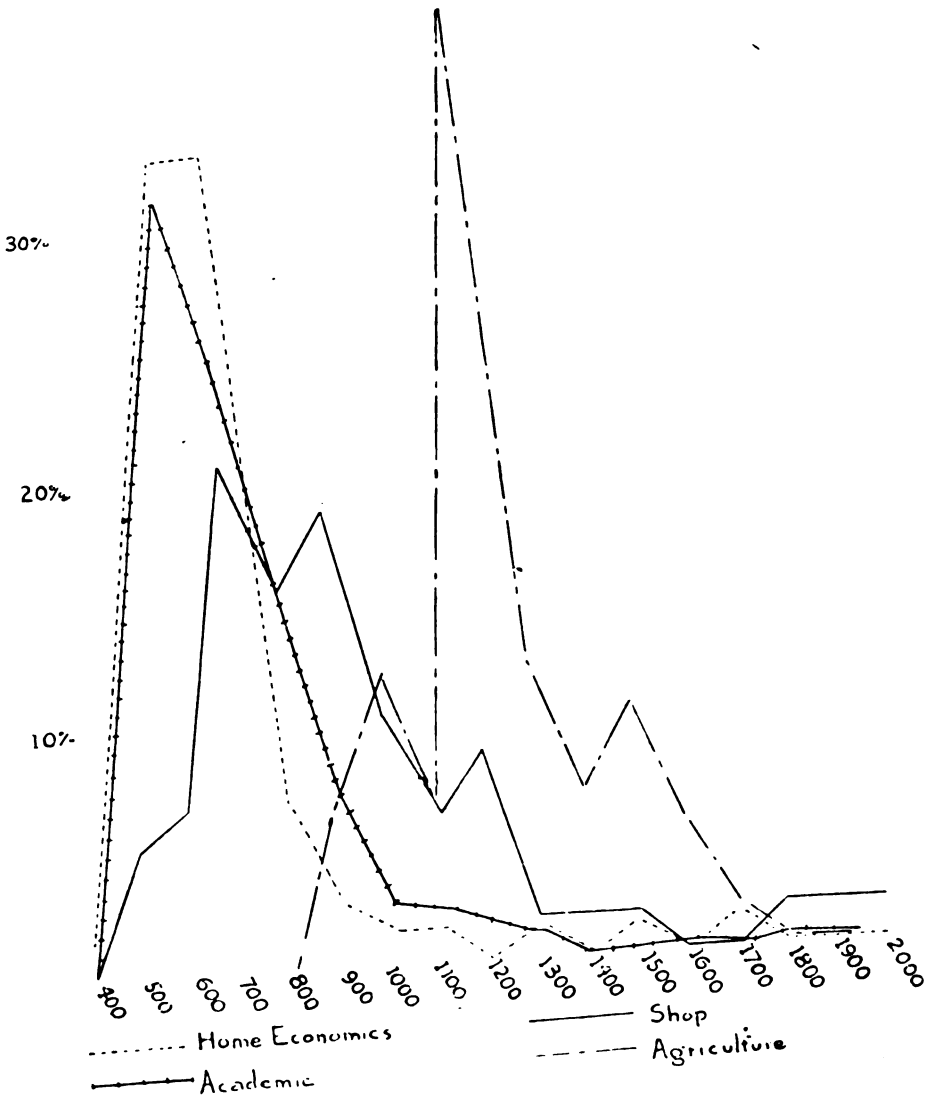


Figure 13
Salaries of high school instructors by departments

TABLE LXII

HIGH SCHOOL SALARY DISTRIBUTIONS

DEPARTMENT	MEDIAN	MIDDLE 50%
Home Economics....	$ 700	$ 624 to $ 774
Regular High School.	725	628 " 830
Shop.....	863	759 " 1,074
Agriculture.....	1,206	1,197 " 1,292

The salaries of the instructors in home economics and in regular high school work follow much the same form of distribution. The median and mode are nearly the same, as are also the lower quartiles.

The upper quartiles are a little farther apart. In every single item of comparison the number for home economics instructors is the smaller one.

Shop and agriculture salaries have two marked characteristics: (1) the curves of distribution are more irregular, and (2) the salaries are markedly higher than for the other two groups. There are two probable reasons for the first fact,—(1) the wide range in the character of the work done and hence in the type of instructors employed,[7] and (2) the fact that because of the newness of this kind of work in these schools the work is not well standardized. The higher salaries are probably due to (1) newness of the work and hence scarcity of instructors, especially in agriculture, (2) technical character of training needed for preparation for such work, and (3) the fact that most of these instructors are men.

TIME UNIT COST

In determining time unit cost both salaries and expenses for current supplies were included in computing the cost, as has been stated before. The time unit taken was the pupil recitation. To determine this unit cost in any department, as in shop work, the method was as follows: the sum of the salaries and cost of supplies for that department for the year was the year's cost of maintenance of that department. The product of the figures representing any course for that department, pupils enrolled, weeks the course ran, and recitations per week, constitute the pupil-recitation periods in that course. The sum of the pupil-recitation periods of all courses in the department is the total number of pupil-recitation periods to be charged to that department. The total cost of maintenance divided by the total number of pupil-recitation periods gives us as a product the cost per time unit.

The time unit cost of each of the special departments is shown herewith.

[7] See *Twentieth Annual Report, Inspector of State High Schools*, 57.

TABLE LXIII

TIME-UNIT COST OF DEPARTMENTS IN SEVENTY-ONE HIGH SCHOOLS MAINTAINING FOUR DEPARTMENTS OF WORK

COST	HOME ECONOMICS	AGRICULTURE	SHOP WORK	HIGH SCHOOL
0 to .9	1			
2 " 2.9	12		1	
3 " 3.9	14		7	5
4 " 4.9	12	1	4	25
5 " 5.9	8	5	5	13
6 " 6.9	9	2	10	16
7 " 7.9	5	3	7	2
8 " 8.9	2	2	6	6
9 " 9.9	2	3	5	2
10 " 10.9	2	2	5	2
11 " 11.9	1	4	7	
12 " 12.9	0	5	2	
13 " 13.9	0	6	2	
14 " 14.9	0	5	5	
15 " 15.9	2	2	1	
16 " 16.9	0	1	1	
17 " 17.9	0	3	1	
18 " 18.9	1	6	0	
19 " 19.9		3	1	
20 " 20.9		2		
21 " 21.9		1		
22 " 22.9		1		
23 " 23.9		0		
24 " 24.9		1		
25 " 25.9		1		
26 " 26.9		1		
27 " 27.9		1		
34 " 34.9		1		
37 " 37.9		1		
38 " 38.9		1		
39 " 39.9		0	1	
40 " 40.9		1		
43 " 43.9		1		
44 " 44.9		1		
47 " 47.9		1		
48 " 48.9		1		
49 " 49.9		1		
50 " 50.9		1		

MEDIANS: Home Economics..... 4.2 cents
Agriculture.....14.0 "
Shop Work..... 7.8 "
High School..... 4.9 "

This table shows several facts of interest. Possibly some of them are brought out more clearly by Figure 14. In the first place the cost of instruction in regular high school work is quite well standardized. And the departments here included under "high school" can not include any home economics, shop work, or agriculture. If there were any schools here that did not receive special aid that condition might be true. But in these seventy-one schools the work of all departments that might receive special aid has been transferred to its respective department. The figure

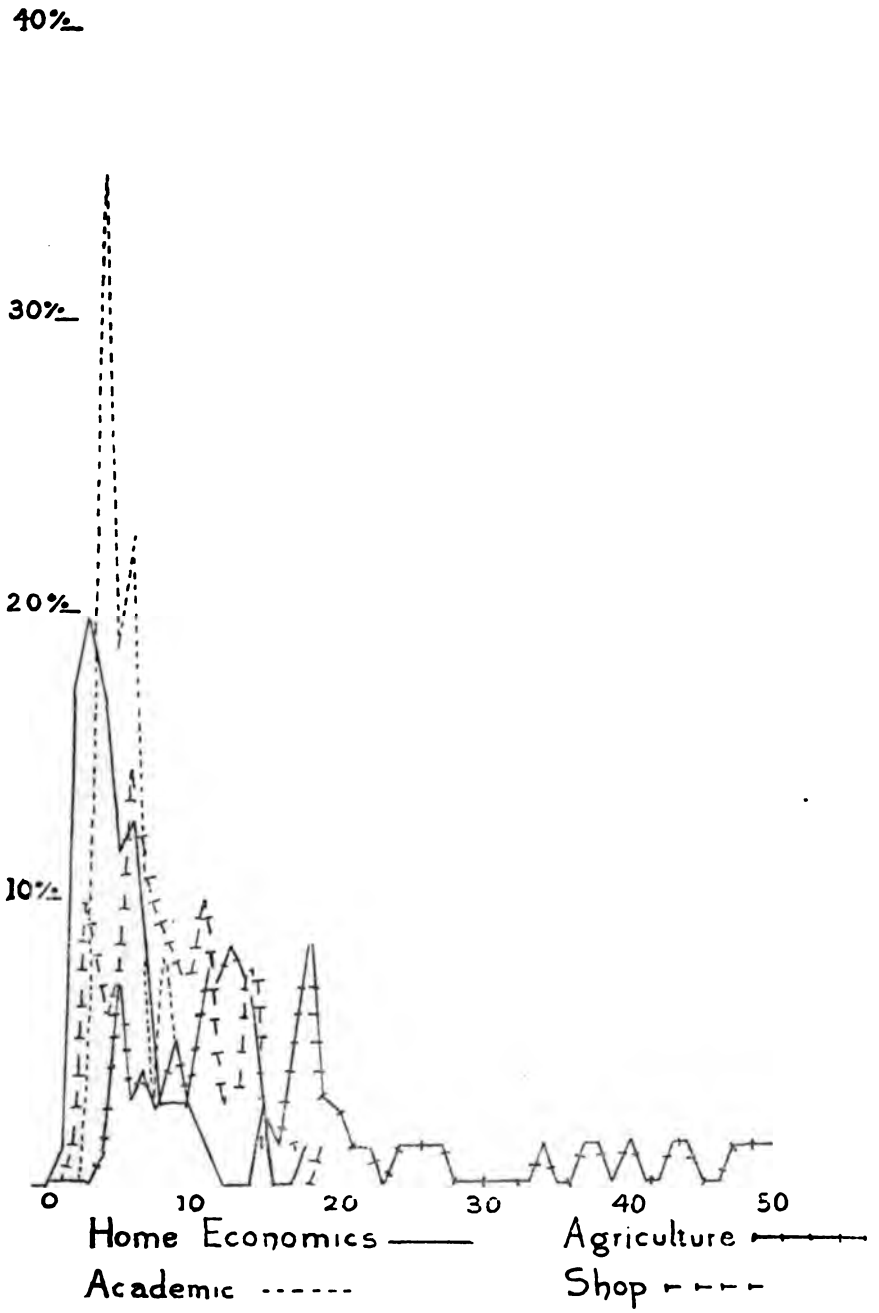


Figure 14
Unit cost of high school instruction by departments

for the cost of academic high school instruction in this case then applies only to academic instruction. The modal cost of this instruction is 5 cents, the median cost is 4.9 cents.

The cost of instruction is not so nearly standardized in any other department. It is least standardized in agriculture. Home economics is more nearly standardized than shop instruction.

The second interesting feature is in connection with departmental comparisons. Because of what has been found out concerning salaries in these respective departments (Table LXI), one would expect the unit cost of agriculture to be the highest, as it is.[8] One would also expect the cost of shop instruction to be next, as it is. But one is rather surprised to find the cost of home economics below regular high school instruction.[9] There are probably two facts that help explain this situation. The first is, as we have seen, that the salaries of the teachers of home economics as a group are below that of the high school instructors as a group, in any way they are compared. The second reason is that the cost of supplies for the home economics department of a small high school in many cases does not exceed the cost of supplies for a science department in the same school. The low figures for "other expenses" in this department is a noticeable feature of the reports as returned from the schools.

In the third place, the extremely high cost of agricultural instruction in many of the schools not only indicates a pronounced lack of standardization of the type of work aided in this department, but it also raises the serious question as to whether some schools are not either uneconomical in their expenditures for agriculture, or whether they have not stressed this department to a degree that reacts upon the possible growth of other departments.

In the fourth place, these facts suggest that one could work out from unit costs a reasonable estimate of what a course in agriculture should cost a school if he knew the amount of time a pupil should be expected to spend in the recitations of such course.[10] The same would hold true with respect to an estimate for any one of these departments. Such an estimate could not be rigidly set as a standard. Variations would need to be allowed. But it would at least be true that with such an estimate, carefully worked out, the state could determine, within reasonable limits, when any school was making excessive or unwarranted expenditures in a

[8] One reason for the greater cost of agricultural instruction is the fact that the high-school teacher in this department is required to do extension work. He teaches the first half of the day and goes into the country afternoons and Saturdays giving expert advice, organizing clubs, and performing gratis for the farmers of that community such work as will assist them in improvement in applied agriculture. Some may say that the proportion of an instructor's time devoted to such extension work should not be charged to the school district. Perhaps it should not be, but it is, and because of present school practice must be included here.

[9] It will be shown later in the chapter that a slightly higher figure more nearly represents the cost of regular high school instruction for the state at large.

[10] See *Annual Report of the School Committee*, Newton, Mass., 1911, 142, *et seq.*

department. The estimate would also furnish a basis of operation for determining how much a district should spend in any one of these departments before it should be entitled to any state aid for such work. Some such plan, or a modified form of it, is the state's greatest need at present in connection with the distribution of special aid to these departments.

The fact that high school instruction-cost appears so much higher in one group of high schools than in another led to a search for some explanation. The rise in this cost caused by including the schools without industrial departments, at once raised the question whether there is any connection between cost of regular instruction and the presence of departments receiving industrial aid, and if there is any connection, just how it operates and why.

To attempt to answer these questions, as many high schools as possible receiving special industrial aid were put into one group, and about the same number that did not receive such aid were put into another group. The unit cost of instruction in regular high school work was then computed separately for each group.

The facts of this cost in the two groups are shown in Table LXIV.

TABLE LXIV

UNIT COST OF ACADEMIC INSTRUCTION IN INDUSTRIAL AND NON-INDUSTRIAL HIGH SCHOOLS

COST PER PUPIL-RECITATION	NUMBER OF SCHOOLS	
	Industrial	Non-industrial
Cents		
3 to 3.9	11	4
4 " 4.9	22	9
5 " 5.9	23	23
6 " 6.9	9	19
7 " 7.9	5	11
8 " 8.9	5	5
9 " 9.9	5	6
10 " 10.9		4
11 " 11.9		1
12 " 12.9		
13 " 13.9	1	
15 " 15.9		1
16 " 16.9		2
19 " 19.9		1
26 " 26.9		1
Total number of schools	80	87
Median cost	5.2c	6.6c

Finally, there was available a total of 164 high schools,[11] some having, and some not having, departments receiving industrial aid. The cost of regular high school instruction was computed for this group of schools. The results are shown in Table LXV.

[11] This group consists of the former seventy-one schools with ninety-three others added.

TABLE LXV

UNIT COST OF ACADEMIC TEACHING IN ONE HUNDRED AND SIXTY-FOUR HIGH SCHOOLS

COST	NUMBER OF SCHOOLS
Cents	
2 to 2.9	1
3 " 3.9	6
4 " 4.9	41
5 " 5.9	38
6 " 6.9	41
7 " 7.9	11
8 " 8.9	11
9 " 9.9	8
10 " 10.9	3
13 " 13.9	1
15 " 15.9	1
16 " 16.9	1
24 " 24.9	1
* Median 5.8 cents.	

For Minnesota we have, then, the following figures covering the cost of regular high school instruction in schools taken by different groupings.

TABLE LXVI

UNIT COST OF ACADEMIC INSTRUCTION IN MINNESOTA

NUMBER OF SCHOOLS IN GROUP	TYPE OF SCHOOLS INCLUDED		
	Industrial	Non-Industrial	Both
71	.....	4.9c	.....
80	5.2c	.....	.....
87	.....	6.6c	.....
164	.....	.....	5.8c

For the state as a whole the cost of regular high school work for the group of 164 schools seems to be the most representative figure. It is practically the median of the three others. By including a fair representation of all types of high schools in the state, it is clearly representative of conditions for the entire state.

The question at once arises as to which group should be selected for purposes of comparing high school costs. Is not 5.8 cents, that which more nearly represents the entire state, the correct one on which to form such comparisons rather than 4.9 cents, which is the high school cost in only those seventy-one schools? The question is a very fair one, but the answer is quite evident. Those seventy-one schools constitute the only group whose unit costs can in justice be compared with other studies. In every Minnesota group other than this one, some schools in the "non-industrial" group are supporting some industrial work. "Non-industrial"

means merely that none are receiving special industrial aid for such work. "High school" unit cost in "non-industrial" groups, other than the seventy-one, includes, then, the cost of some industrial work. In the seventy-one schools "high school" cost covers *only* academic instruction. All industrial work is placed in one of the three industrial departments, about one third of which receive special aid for each of the three industrial departments. This is the condition most nearly comparable to that in other schools compared where the cost of the work of each department includes none of the cost of work from any other department.

When we want figures that reflect more nearly conditions for the state as a whole the unit cost of "high school" work among the 164 is the one to be used. Better still and more nearly the truth would be two figures, one for "industrial" and the other for "non-industrial" schools.

Our problem here, however, was to find out, if possible, some of the reasons for the existence of difference in cost in presumably the same general department of work.

One reason has already been partly stated. In many high schools that receive special aid for only two departments, some work is done representing the third department. In computing costs as we have been obliged to do, the cost for this third division of work has been included under "high school" or "academic" work.

Again, in practically all high schools, including those receiving no special industrial aid, some industrial work is done. In these cases the cost of all such industrial work is computed with the cost of "high school" work.

But errors of method do not account for all the variation. Work in home economics costs less than regular high school work. Shop work in all probability is usually no more than bench or perhaps cabinet work, except where it receives special recognition and aid. Agriculture, the costliest department, is seldom if ever maintained in any school as a department until it receives special aid. The difference in the cost of academic work does not seem to be covered by the possible causes so far described.

At last after diligent search another cause was found. Forty-six instructors in special departments,—not including superintendents,—for which the state pays special aid, gave from one fourteenth to three sevenths of their time, respectively, to teaching regular high school subjects not specially belonging to their departments. The distribution of this part of their time is shown in Table LXVII.

At the time that the work on unit cost of instruction was completed results were compared with those computed by Frank E. Spaulding for Newton, Mass.[12] His findings are comparable with those for Minnesota

[12] See *Annual Reports of the School Committee*, Newton, Mass., 1911; *ibid.*, 1912; *ibid.*, 1913.

since his method is similar to the one employed here, except that he includes only salaries and not any other expenses. "The common unit is a single 'recitation' for a single pupil;—all recitations are practically the same length, about forty-five minutes."[13] His findings are represented in Tables LXVIII and LXIX.

TABLE LXVII

TIME DEVOTED BY INDUSTRIAL INSTRUCTORS TO TEACHING ACADEMIC HIGH SCHOOL SUBJECTS

FRACTION OF SCHOOL DAY	NUMBER OF INSTRUCTORS
1/14	6
1/7	17
1/5	2
8/35	3
1/4	1
2/7	8
7/22	1
3/7	2
12/35	2
1/2	1
13/35	1
3/7	2

TABLE LXVIII

PUPIL RECITATION COSTS[14] IN NEWTON, MASSACHUSETTS HIGH SCHOOLS

SCHOOL	HOUSEHOLD ARTS					SHOP WORK				
	1911	1912	1913	1914	Average	1911	1912	1913	1914	Average
Technical	6.2	8.8	4.2	4.0	5.3	8.7[15]	7.9	4.1	6.0	6.7
Vocational	.....	.....	6.4	5.7	6.1	.....	.....	9.9[16]	6.6	8.3
Newton High	.....	.....	.....	.....	5.7	.....	.....	.....	.....	7.5

TABLE LXIX

ACADEMIC

	1911	1912	1913	1914	Average
Technical	5.8	5.8	5.7	5.4	5.7
Vocational	.....	.....	7.3	6.2	6.3
Newton High	5.6	5.7	5.7	5.7	5.7

[13] *Annual Reports of the School Committee*, Newton, Mass., 1911 p. 121.

[14] For figures representing cost of 1911, see report of that year, table 14, opposite p. 1212. For those representing the cost of all the other years, see *Report* for 1913, tables 10, 11, and 12, opposite p. 83. All the averages have been computed for this table.

[15] Listed as "Mechanical Work."

[16] Average of separate costs of (1) cabinet making, (2) pattern making, (3) machine shop.

In 1915 the results of two other studies on unit cost of high school instruction were published. One, by Walter S. Monroe,[17] is for the state of Kansas, and includes 203 schools. The other, by Franklin Bobbitt,[18] is a study of twenty-five high schools scattered over several states.

The methods and units used by each of these investigators allow comparisons between costs of high school instruction as computed for each of these separate groups and costs computed for Minnesota schools.

In using these studies for comparative purposes certain additional computations were made. The median cost of all academic subjects was computed for Kansas schools. This was done by finding the median of the array of the separate costs as given by schools for English, mathematics, history, science, modern languages, Latin, and commercial subjects.[19] Medians for the cost of instruction in agriculture, household arts, and manual training were computed for the array of costs in each subject just as these costs are given in the report.

To be able to use the study of the twenty-five schools comparatively "thousand student hours" was reduced to a forty-five minute hour cost. Medians were computed, where not given, in identically the same way as for the Kansas schools.

Inasmuch as there are some known differences among the methods of these several investigators, and perhaps more unknown differences, in presenting the table of comparisons there is presented not only the unit cost as found, but also for each study the ratio of the unit cost of each special department to that of the academic department. These comparisons are shown in Table LXX.

TABLE LXX

COMPARISONS OF UNIT COST OF HIGH SCHOOL INSTRUCTION

	Cost in Cents per Pupil Hour				Ratio to Academic Cost		
Study	Agriculture	Shop	Household Arts	Academic	Agriculture	Shop	Household Arts
Bobbitt	3.6	7.0	4.6	4.7	.77	1.49	.77
Kansas	5.1	5.7	4.7	4.7	1.09	1.22	1.00
Minnesota	14.0	7.8	4.2	4.9	2.86	1.59	.86
Newton	.....	7.5	5.7	5.7	.....	1.31	1.00

In the above table the following facts are noteworthy:

1. With the exception of one city, Newton, the ranking of the studies in the order of academic costs corresponds roughly to their ranking in shop costs.

[17] Monroe, The Cost of Instruction in Kansas High Schools, *Bureau of Education Studies*, Number 2. Kansas State Normal School, Emporia, 1915, *Measurements and Standards*.

[18] Bobbitt, High School Costs, *School Review* 23:505.

[19] *The Cost of Instruction in Kansas High Schools*, 32, 33, 34, 35.

2. With the exception of Newton, the ranking in academic costs corresponds roughly with the ranking in household arts costs.

3. Unit cost for household arts work never exceeds unit cost for academic cost.

4. Unit cost in shop work always exceeds academic unit cost by at least one fifth.

5. Costs in agriculture show greatest variability, both in unit costs and in ratio to academic costs. Even though one estimates that half of the school day of each agriculture instructor in Minnesota is devoted to extension work, the unit cost of the instruction for this work in the state is still in excess of both unit and ratio cost for corresponding work in the other groups. This estimated division of time given to extension work is too large.

6. Except in agricultural instruction, Minnesota is in the "safety zone" of unit costs for high school work.

7. In agriculture the cost of instruction is questionably high. Rather than allow this condition to continue indefinitely and unchallenged the state should make an exhaustive investigation to determine why these costs are as high as they are and whether they are justifiable.

Correlations

The correlations between the unit cost of regular high school work and that of the special departments were computed by the Pearson method for the group of seventy-one schools. The results are shown in Table LXXI.

TABLE LXXI

Correlation of Unit Cost in High School

Item A	Item B	r[30]
Regular high school work	Agriculture	+.336
Regular high school work	Home Economics	+.358
Regular high school work	Shop Work	+.085

Expenses of instruction in agriculture and in home economics tend to rise and fall, to increase and decrease with expense of instruction in regular high school work in this group of schools. This tendency is most marked in the case of home economics. We are not surprised at this, knowing the rather close comparison of salaries among home economics teachers and regular high school teachers. The high correlation figure in the case of agriculture comes somewhat as a surprise. It tends to bear out the assertion previously made, however, that the industrial high schools as a group are not only the best organized, but the best supported as public educational institutions.

[30] Each correlation coefficient is unattenuated.

After the two preceding rather high correlation figures the low one in shop work is hard to explain. There is without doubt, though, a very great variability in the kind of work here included. The cost of this work varies greatly with the kind of work given. It varies not only in the nature and shop costs of the work given but also in the salaries paid. The table of salaries shows the variability of the salaries of teachers in this department to be the greatest for any group of teachers studied.

In attempting to ascertain the results of the support of these industrial departments a question naturally arises as to the effect the departments have had upon the personnel of the student body. Are more people drawn to the high school? Are more people drawn from the country to attend these departments than attended the high schools before?

Tables LXXII, LXXIII, LXXIV, LXXV, and LXXVI were compiled in the attempt to get some light on these questions. Teacher-training departments were taken into account. When they were established, "it was hoped that third grade teachers, young people who were rather mature for eight grades, would enter a special school of this sort—."[21] If the results had been as expected the high schools with such departments would have had an increase in enrollment both in total and from outside, which should not be confused with outside enrollment due to industrial departments.

TABLE LXXII

TEACHER TRAINING DEPARTMENTS

YEAR	NUMBER OF DEPARTMENTS	TOTAL ENROLLMENT	PER CENT	TOTAL HIGH SCHOOL ENROLLMENT	PER CENT OF 1905-06
1905-06 (13)	13 (38)	229 (38)	1.0	22,106 (15)	
1906-07 (14)	10 (27-8)	182 (28)	0.8	23,687 (13)	107.1
1907-08 (15)	10 (36)	253 (36)	1.0	24,530 (16)	110.9
1908-09 (16)	7 (39)	173 (39)	0.7	26,583 (18)	120.2
1909-10 (17)	28 (35)	489 (35)	1.7	28,562 (17)	129.2
1910-11 (18)	56 (50)	740 (50)	2.5	29,971 (27)	135.5
1911-12 (19)	81 (49)	1,018 (49)	3.1	33,295 (29)	150.6
1912-13 (20)	80 (61)	974 (61)	2.8	34,854 (36)	157.9
1913-14 (21)	106 (43)	1,256 (43)	3.4	36,703 (31)	166.0
1914-15 (22)	119 (5)	— *		39,520 (28)	178.7

* No data given in the report.

NOTE: The figures in parentheses after the years are the respective annual reports of the state inspector of high schools from which the data have been taken. The figures in parentheses other than these are the pages in these reports from which the respective data have been secured.

Results did not meet hopes. The state inspector two years later reported the enrollment in these training departments "confined almost entirely to high school pupils."[22] The establishment of the departments resulted only in opening a possible new field of work for pupils already attending. Similar results seem to have followed the spread of this work

[21] *Thirteenth Annual Report of State High School Inspector*, 37, 38.
[22] *Fifteenth Annual Report*, 36.

in more recent years. Computations for the department are included, nevertheless, in order that no data may be lacking.

Tables LXXII, LXXIII, and LXXIV aim to give an idea of the relative growth of departments operating under the teacher-training aid, $2,500 industrial aid, and $1,800[23] industrial aid, respectively. Enrollment in agriculture only is taken for the industrial departments. There is no enrollment given for the entire department. One could add the agriculture and the home economics enrollment, or the shop and home economics. But the relative growths in agriculture are the most typical and fairest to take since agriculture was the only one of the three subjects that was *required* in the second group of industrial schools.

TABLE LXXIII

SCHOOLS RECEIVING $2,500 INDUSTRIAL AID

YEAR	NUMBER OF DEPARTMENTS	AGRICULTURE NINE MONTHS	ENROLLMENT SHORT COURSE	PER CENT OF TOTAL HIGH SCHOOL ENROLLMENT*
1905-06	None			
1906-07	"			
1907-08	"			
1908-09	"			
1909-10	9 (36)	245 (38)	187 (38)	0.9
1910-11	9 (41)	266 (41)	256 (41)	0.9
1911-12	28 (33)	937 (37)	532 (37)	2.8
1912-13	28 (51)	1,118 (55)	544 (55)	3.2
1913-14	37 (49)	1,678 (48)	489 (48)	4.5
1914-15	38 (56)	1,760 (60)	426 (60)	4.5

* Computed for those enrolled in the nine months' course.

NOTE: See note to Table A.

TABLE LXXIV

SCHOOLS RECEIVING $1,800 INDUSTRIAL AID

YEAR	NUMBER OF DEPARTMENTS	AGRICULTURE NINE MONTHS	ENROLLMENT SHORT COURSE	PER CENT OF TOTAL HIGH SCHOOL ENROLLMENT
1911-12	50 (35)	1,538 (37)	584 (37)	4.6
1912-13	68 (53)	2,125 (55)	656 (55)	6.1
1913-14	82 (46-47)	2,491 (29)	689 (49)	6.8
1914-15	91 (57-58)	2,767 (61)	595 (61)	7.0

Table LXXV shows the per cent of outside enrollment for the last eleven years in the high schools receiving special industrial aid in 1914-15. The fact that the number of schools is not the same every year is accounted for by the fact that certain of these schools have been added to the state high school list each year. The per cent of outside enrollment in such schools when they were on the list of graded schools would have been computed had the graded school inspector's report given the necessary

[23] At first $1,000. See Chapter 2.

data. All the computations of this table are made on the enrollment figures in the reports of the high school inspector as referred to in Table LXXII.

TABLE LXXV

PER CENT OF OUTSIDE ENROLLMENT IN INDUSTRIAL HIGH SCHOOLS FOR THE LAST ELEVEN YEARS

PER CENT	1904–05	1905–06	1906–07	1907–08	1908–09	1909–10	1910–11	1911–12	1912–13	1913–14	1914–15
0– 4.9	7	8	9	6	5	3	3	0	3	0	7
5– 9.9	9	14	8	11	9	8	8	7	7	6	6
10–14.9	15	18	15	15	10	13	13	9	9	5	9
15–19.9	14	15	11	17	21	18	10	15	16	15	9
20–24.9	12	10	18	12	19	22	19	23	18	16	23
25–29.9	13	6	14	12	16	12	16	15	28	22	17
30–34.9	13	17	16	12	11	16	16	22	15	18	25
35–39.9	6	5	8	15	13	10	7	10	9	17	13
40–44.9	11	8	5	11	6	7	8	12	9	11	6
45–49.9	1	7	6	3	3	6	12	3	2	4	7
50–54.9	3	4	0	3	4	1	2	4	5	4	4
55–59.9	1	0	3	1	0	2	5	3	5	1	4
60–64.9			2	1	1	1	0	1		5	
65–69.9			1		0		0			0	
70–74.9					1		0			1	
75–79.9							0			1	
80–84.9							1				
Medians..	105 23.3	110 20.0	116 19.3	119 19.6	119 18.9	119 19.1	120 22.3	124 22.7	126 21.9	126 24.9	130 23.4

Table LXXVI gives the summaries of the preceding four tables and states also the per cent of outside enrollment in all the schools of the state.

TABLE LXXVI

DIVISIONS OF HIGH SCHOOL ENROLLMENT FOR THE STATE ON THE BASIS OF PER CENT OF TOTAL HIGH SCHOOL ENROLLMENT

YEAR	IN TEACHER TRAINING DEPARTMENTS	IN PUTNAM† SCHOOLS IN AGRICULTURE	IN BENSON-LEE‡ SCHOOLS IN AGRICULTURE	TOTAL OUTSIDE ENROLLMENT	
				All schools	Industrial schools
1904-05	.0			13.6	23.3
1905-06	1.0			14.2	20.0
1906-07	.8			14.3	19.3
1907-08	1.0			14.3	19.6
1908-09	0.7	0.9		14.6	18.9
1909-10	1.7	0.9		15.4	19.1
1910-11	2.5	2.8	4.6	16.0	22.3
1911-12	3.1	3.2	6.1	16.4	22.7
1912-13	2.8	4.5	6.8	16.2	21.9
1913-14	3.4	4.5	7.0	17.0	24.9
1914-15	*			16.7	23.4

* No data given in report.
† Schools earning $2,500.00.
‡ Schools earning $1,800.00.

From the data in the last five tables these conclusions seem warranted:

1. Teacher-training departments have acted largely as a new field of work for regular students and have not attracted non-high school students to a great degree.

2. The schools receiving special industrial aid are a group of schools that have always had a larger per cent of outside enrollment than the group of non-industrial schools.

3. For the state at large the industrial departments have to some degrees drawn non-residents. This result has not been very marked and up to date has succeeded in scarcely more than bringing back to relatively the same group of schools a proportion of outside enrollment equal to what was theirs ten years ago.

4. Except for the short courses and the extension work of departments receiving industrial aid, their most marked service and by far the greatest part of their work has been among the high school children, who in all probability would be in school even if these departments did not exist.

5. In other words, excellent as the industrial work may be, for the state at large its maintenance means only new departments for regular high school pupils rather than any decided change in the personnel of the high school group.

Objections and exceptions to these conclusions may be anticipated.

One will be that no account has been taken of consolidated schools. Nor should there be. When consolidation is considered, then aid for consolidation immediately becomes a partial cause for all results. It is true that the added attraction of industrial aid may have helped toward consolidation in some instances. The present consolidation aid is so liberal, however, as to raise a very serious question as to how much influence industrial aid alone would have had.[24]

Some may say that associated districts have made some industrial schools possible.

It must not be forgotten that association has been well baited by association aid for both parties concerned.

The Twenty-second Annual Report of the High School Inspector is the only one that gives any data on association.[25] Forty-one high schools have such associations, with 831 children included by reason of the associations. We know that in some cases these children are not even transported to the central school, but remain in their own districts under central supervision. Judging according to rural schools in general, the greater proportion of those pupils who go to the central district enter the grades and not the high school department. Let one estimate the number in the high schools, due to association and then let him compute, if he wishes, the ratio of credit between association aid and industrial aid, for the presence of those pupils, and it will be quite clear that the source of error in the previous conclusions on this account is almost negligible.

[24] At the date of completing this study, 1916, there is only one pure consolidated school on the high school list. See *Twenty-second Annual Report of State High School Inspector*, 4.

[25] *Ibid.*, 64.

Summary and Conclusions

1. The group of schools having industrial departments seems to be better organized and standardized as typifying a group.

2. Industrial schools do not have quite so high a unit cost in academic work, as is shown (1) by their close grouping, and (2) by the scattered cases in the non-industrial group.

3. There is a decided lack of standardization of the cost of high school instruction for the state as a whole.

4. Among the industrial departments the cost of home economics is least and seems most nearly uniform.

5. Shop work seems fairly uniform in cost.

6. Agriculture costs are much lacking in uniformity. Without doubt this work lacks standardization.

7. Salaries of agriculture instructors are too greatly out of proportion to other high school salaries.

8. If salaries of agriculture instructors are to include payment for extension work, then a specific part of their total time and salary should be definitely set aside for such purpose. We should know what extension work costs as an item separate from high school instruction.

9. Comparative unit costs indicate that industrial work for boys costs more than academic, but that industrial work for girls never costs more.

10. On the other hand in certain schools special industrial aid results directly in lessening the cost of regular high school instruction by special instructors devoting part of their time to regular high school teaching.

11. The establishment and state support of special departments have meant the enlargement of the curricula for those already attending high school and have not materially increased high school enrollment.

12. Except in the matter of agriculture, unit costs for high school instruction in Minnesota are neither extremely high nor extremely low, as compared with similar costs elsewhere.

13. Standardized methods of accounting and of reporting expenditures should be required so that there can be a strict checking of all expenditures of each department annually.[26]

14. There should be more adequate provision for close supervision of all special work by the state.

15. The work of all departments should be standardized in direct accordance with the work that the Minnesota communities need.

16. All schools which receive industrial aid should be required to conform to such standards.

17. Through the formation and use of these standards and their proper revision, from time to time, there should be a definite attempt to distribute state aid more equitably among the several departments of the high school.

[26] See blank for Industrial School Report.

CHAPTER VIII
CONCLUSIONS

After a consideration of all the facts presented can we answer our first inquiry, "What is the effect of state aid in Minnesota? Is state support securing satisfactory results or results commensurate with the amount of money given?"[1]

Before attempting to make a final answer let us try to lay down some criteria or principles which may guide our judgment. Considerable assistance is given us here by a careful examination of some of Swift's findings in his study of "Public Permanent Common School Funds."[2] "The decline of the common school system of Connecticut under the influence of the school fund was a most convincing demonstration of the principle that an endowment which relieves the community from the necessity of raising money by local effort is an injury to the community and to the cause the endowment is seeking to advance."[3] In New York, the act of 1812, passed three years prior to the first distribution of the revenue of the New York School Fund, required "a local contribution equal to the amount received from the state."[4] The House Committee on Education of the Massachusetts Legislature in 1828 stated that if the state gave local communities about one third the amount they themselves raised, such grant would act as an incentive to interest and to effort.[5] The Special Commission on the Permanent Common School Fund of Vermont, 1906, stated, as one of the purposes of a permanent school fund that it should "lay the foundation of a true and actual supervision by the state, of public instruction, in connection with its actual direction of and accounting for school moneys disbursed, particularly such funds as the state itself supplies to towns by taxation or through permanent investment for the support of schools."[6]

Swift concludes that "there has been little uniformity in the objects to which different states have permitted the income of the permanent common school funds to be applied."[7] At the same time a survey shows quite clearly defined aims. "The earlier methods of apportionment . . . . were adopted simply as means of distributing the school revenue equally, as it was supposed, among the different communities of the state . . . . The more complex methods of apportionment . . . . have aimed directly

[1] See Chapter 1, p. 2.
[2] Swift, *Public Permanent Common School Funds in the United States 1795-1905*.
[3] *Ibid.*, 168.
[4] *Ibid.*
[5] *Ibid.*, 169.
[6] *Report of the State Commission of Permanent School Funds of Vermont*, 32, quoted from Swift, 170.
[7] *Permanent Common School Funds*, 171.

to equalize the cost of maintaining schools and to equalize also the opportunities of education throughout the state . . . . The second aim revealed in the more complex methods of apportionment is to encourage local communities to employ supervision, more teachers, to increase average attendance, to increase taxation for schools and the number of schools."[8]

He finds that the results of these funds have been: first, to make state provision for a fund to pay teachers' wages, and hence to increase the efficiency of teachers;[9] second, to secure returns to the state from local school units, and thus to establish a state system of schools and to lay the foundation for state supervision of common schools;[10] third, to decrease the "ratio of the total common school revenues derived from the income of the permanent common school funds;[11] fourth, to improve school buildings;[12] fifth, to raise the standards of educational opportunities and facilities by securing[13]

1. Better courses of study
2. Enforcement of truancy laws
3. Libraries, apparatus, free texts
4. Transportation and tuition of pupils

That part of the state aid in Minnesota which is the income from the permanent school funds falls directly in the field of Swift's discussion and conclusions.[14] But before attempting to apply any of his discussion directly to the state situation we may raise the question whether it is fair to judge any of the rest of the state aid of Minnesota by standards the same as or similar to those by which the income from the permanent school funds is judged.

The essential characteristics of a permanent school fund are only two—first, permanency, and second, state control with respect to the distribution of the income to local units. How does special state aid in Minnesota compare in these respects with any permanent fund? The state has done three things through this special aid; (1) It has created a source of aid for its public schools; (2) It has maintained that aid, increasing it at times, over a series of years, thus making it tend to become in essence a permanent or at least a fixed source upon which the schools come to rely; (3) It continues to reserve to itself and to its duly authorized agents the determining of the conditions under which local units may receive this aid. Such aid and such revenue may be justly judged along with the

[8] *Ibid.*, 190.
[9] *Ibid.*, 191.
[10] *Ibid.*, 194-7.
[11] *Ibid.*, 198.
[12] *Ibid.*
[13] *Ibid.*, 199.
[14] *Ibid.*, ch. 31.

permanent school funds with respect to the results it has achieved, and without injustice be subjected to similar tests of aims, methods of distribution, and efficiency in general.

The permanent fund income may itself even be supplemented by a form of special subsidy. This is precisely what has been done in Minnesota. Since 1887 the income from a state one-mill tax levy has been added annually to the permanent fund income and the total sum has been distributed as if it all were the income from the permanent fund.[15] Certainly it would be inconsistent and illogical to attempt to make a division here and judge results by two sets of criteria just because the money, though all distributed in the same manner, represents two different sources of income.

But Swift concludes, and forcefully presents the facts on which his conclusions are based,[16] that the existence of a permanent school fund and the distribution of its income do not imply, *ipso facto*, the attempt to reach a given aim or set of aims, or the existence of any given restrictions by which the desired aims are to be attained. It is quite clear then that the case of the permanent fund being augmented by subsidy, as it were, is not the only instance where school support from sources other than the permanent fund may justly be amenable to examination on the same basis as the fund itself.

For fifty-five years preceding this study[17] the schools of the state have been recipients of the benefits of a permanent fund. The only change of importance that has been made in this fund during this more than half century is that its income has been augmented by a state one-mill tax levy. This change was made twenty-six years prior to our investigation. For thirty-five of those fifty-five years the high schools of the state have been a separate group receiving special aid. The only important changes in this aid in the last thirty-three of those thirty-five years have been the increases in amount and the changes in requirements prerequisite to its bestowal. For the last eighteen years of the fifty-five, special aid has been given to the group of schools called graded. The only changes in their aid have been those similar in nature to the changes for high schools. And finally, during the last fourteen years, rural schools have received special state subsidy, with similar changes accompanying this aid.

The consistency of the state's policy in aiding its school, the unbroken series of years over which this policy reaches, indeed every important factor involved makes the whole situation the same as it might have been had the income from the permanent fund grown so fast that it had been distributed to the above named divisions of schools in the changing avenues

[15] *General Laws*, 1887 sec. 3, sub-ch. 84 of ch. 41.
[16] *Permanent Common School Funds* ch. 7.
[17] Since Minnesota was admitted as a state in 1858.

described. In the sixty-eight years between 1835 and 1903 the modifications in the bases of the permanent fund apportionment for Massachusetts represent far greater change and variability than does the whole history of special aid in Minnesota.[18]

There is therefore no justifiable reason, either theoretical or practical, why all state aid here considered may not be grouped together and judged by similar standards and principles.

The present three forms of special aid to clearly defined, exclusive groups of schools seem to indicate three different stages of advance or development in the principle of state subsidy. Special aid as administered to high schools reveals no examples of overweening local complacency and community lethargy. The correlation tables show no clear tendency in this direction. The integrity of graded schools is not so unmistakably marked. Neither is there revealed any clearly defined tendency on their part toward using state aid to decrease local tax levy. Graded schools seem to represent the middle stage of development. The rural schools on the other hand are in a precarious situation. They are actually given what they do not need. They are consequently dangerously near the condition which caused a positive decline in the common school system of some of the states earlier in our history, as Swift points out. There is a point beyond which state subsidy tends distinctly to pauperize a local community. Special aid to rural schools, distributed on its present basis, is having this very effect upon the group of schools that receive it.

The causes are not far to seek. In the first place it is very clear from evidence both within the schools and within the legislative field, that appropriations to these schools are made with no real reference to any existing conditions. In the second place, the distribution of the aid is very inadequately supervised. The difference in this respect between rural schools on the one hand and graded and high school systems on the other is significant. Special aid to each of the latter was identical in time with provision for special supervision. A special inspectorship for graded schools was created at the same time, as aid for them, and for high schools soon after special aid for them. Every one of these schools has been visited by its inspector every year until very recently.[19] The state has made very definite requirements for these schools.[20] They have become used to the enforcement of these requirements and to gradually but constantly rising standards. The state has known what could be justly asked of the schools because it was in constant close touch with them. Instead of communities saying what they are or are not willing to do,

[18] Cf. *Permanent Common School Funds*, 184-5.

[19] Assistant inspectors for both high and graded schools have been added since the time of this study.

[20] Cf. Notes on high schools and graded schools in Appendix A.

they are now told what is expected of them. They are so satisfied with results as they see them that they practically never refuse compliance.

What is the condition with respect to rural schools? Thirteen years before this study, they began to receive special aid. During the intervening time what special supervision or inspection have they had as a companion measure to the aid? Absolutely none that can begin to compare with the inspection of the other groups of schools. Who has determined conditions prerequisite to their receiving aid? With respect to length of the school year and grade of the teachers' certificate, the legislature, in all other standards, the state department of education, and the legislature has even gone so far as consciously to handicap the department in stating its requirements—the attendance at a school shall be no determining factor in deciding the amount of aid any school may receive.[21]

What means has the state department of enforcing its requirements, or even of knowing that they are met by the schools to whom the aid is given? The certification of the county superintendents in whose counties are located the schools applying for aid. What kind of a state inspector of rural schools does the county superintendent make?[22] In many counties there are so many rural districts that it is a physical impossibility for superintendents to make the round once a year, make real inspections, and do the other work expected of them.[23] This would not be so bad if this inspector and inspection were expert and untrammeled. But it should be remembered that this superintendent occupies not only an educational position but a political one as well. He has a clientele to satisfy or else he runs the risk of losing his position. In some cases he is more of an educator than a politician. There have been and are notable examples of those who are real educators in these positions and on whose action no shade of administrational expediency falls. In such a system there are other county superintendents, unfortunately, for whom the educational activities are rather formal and the political interests the more practical and urgent. Irregularities in reporting rural schools for special aid are bound to exist when inspectors are the political making of the patrons inspected. This combination of conditions lays a strong temptation before every county superintendent. A system of state aid of which this can be said is not only wholly unjustifiable, it is positively nefarious.

Not only does special rural school aid smell of the "Pork Barrel," not only is it pernicious as a policy of republican government, but it is also a most ample reward for the perpetuation of a very unsatisfactory and even obsolete institution. The rural school is not obsolete, neither is the one-room school. But the special aid as it is at present given to these schools

[21] *General Laws*, 1911 ch. 60, sec. 1.

[22] Cf. Cubberley *The Improvement of Rural Schools* ch. 4.

[23] The writer personally knows of districts unvisited for several years consecutively by the county superintendent.

in Minnesota by prerequisite requirements creates no material betterment of the rural school situation. This is exactly opposite to the results which have come from special aid to high and graded schools. They have accepted more stringent requirements from time to time. At last, special departments of industrial work seem to come in a measure as their reward. The latter schools have been attempting to keep abreast of educational advancement and to discharge their debt to their educational constituents. It is true that aid to graded and high schools has been increased and special aid for industrial work has been added. But aid to rural schools has likewise been increased,—in the light of the schools' needs, ridiculously increased.

Evidence regarding the course of study and subject matter taught is not definite. From answers to a questionnaire sent out by the Commission one can conclude with very little chance of error that with exceptions so rare as to be striking, rural schools follow no courses of study. The lists of the text books now in use seem to indicate a remarkably wide spread satisfaction with texts used by previous generations.

It makes no difference from what view-point the problem is approached, similar facts appear. One is compelled to conclude that the present method of distributing special aid to rural schools has little or no justification whatever. It is a detriment to the educational advancement of the state and a positive handicap to the very group of schools which it is presumed to benefit.

Special aid to high and graded schools, as was pointed out in the summaries of the respective chapters on them, has really made these groups of schools what they are to-day. As has already been pointed out, however, there is a very definite need of readjustment of these aids with respect to well defined aims and standards. What is expected of a district in the way of educational accomplishment? What ought such accomplishments to cost a district? How able is a district to meet these costs? How much encouragement and assistance does it deserve from state subsidy? All these questions should be answered in determining any just basis for state aid distribution.

Aid to special industrial departments has without doubt been of great benefit to the schools and the children of the state. There is one imminent danger in connection with it, however. There is lack of definite aim and of adequate standardization in its distribution. In effect this will in the long run cause results the same as lack of proper supervision would bring. In fact the two things are in the end equivalent. In so far as supervision or inspection, well intentioned as it may be, lacks definite, adequate standards of measurement, there is a lack of *real* supervision. The problem of the state's aid to industrial needs is a thorough, impartial reorganization on

the basis of standards to be determined and defined in terms of the actual conditions of the state's need in this field. No other basis can prove satisfactory in securing the results desired or expected.

The apportionment aid has grown to be no small item. It is distributed on a basis of relatively less requirements than when it was first instituted. The income from the permanent fund will doubtless be distributed on the basis of "scholars" for some time to come since the constitution requires it. But since it has been proved that the legislature has the right to interpret what constitutes a "scholar," requirement bases for distributing this aid may be changed from time to time. Standards may presumably be advanced here as in connection with any other aid given. But the income from the one-mill state tax is wholly within the state's present control. Its continued distribution on the same time-worn basis as the permanent fund income is surprising to say the least. Such a method of distribution is but helping to perpetuate an antiquated, ineffective method of state aid to public education. The dynamic possibilities of this amount, redirected on a carefully determined basis, are very great indeed.

This study began with the purpose of answering a question, of solving a certain problem. Anyone who has followed it so far must be clearly convinced that the attempted solution of the main problem has raised many others of great importance but which remain yet unsolved. It was not the purpose in presenting this study to include in it any detailed scheme of state aid. That is quite another matter. Though it is of immeasurable importance, it is quite outside the bounds of this work and will not even be touched upon here.

The study clearly shows that:

1. The state includes communities of widely varying ability in maintaining schools. This is true for each of the three groups of communities included in the main divisions of schools as well as for the state at large.
2. The present method of distributing the apportionment aid is venerable, rather than effective for achieving any particular purpose.
3. Special state aid is not distributed according to local needs among any of the three classes of schools, or according to the needs of industrial departments.
4. Special state aid as administered in Minnesota is a positive detriment to the rural schools.
5. Developmental changes of conditions in the high and graded school situations make the present plan of special aids to these schools out of date.
6. Special industrial aid is not at present adjusted to the actual needs of the departments assisted as shown by the actual costs of these departments.

7. The state does not need greater appropriations for its public schools.

8. The urgent present need with respect to state subsidies for public schools is the careful formulation of a policy of aid to its schools and of objective standards according to which the aid will be distributed.

9. The future possibilities of public school development by a carefully worked out redirection of the present total amount of aid, with frequent rigid checking of results, are beyond computation and seem almost immeasurable.

APPENDICES

APPENDIX A[1]

HIGH SCHOOL BOARD RULES RELATING TO HIGH AND GRADED SCHOOLS

HIGH SCHOOLS

1. APPLICATION FOR STATE AID

a. Applications shall be made on the official blank and not later than August 1 of the school year for which aid is asked.

b. Applications shall be referred to the high school inspector. He or an assistant shall visit such schools during the ensuing year, and the inspector shall submit a special report to the high school board at the next annual meeting.

c. The inspector shall not recommend the listing of schools in districts having an assessed valuation of less than $200,000 or a total enrollment of less than 200 pupils. The assessed valuation of associated territory may be counted.

d. High schools hereafter listed are required to maintain two industrial departments in charge of teachers holding special industrial certificates issued by the superintendent of education.

e. A state school shall be defined as a school which has received state aid to high schools, and is under the supervision of the high school board. The application of a school for supervision does not confer a right to the name before state aid has been granted.

2. GRANTING STATE AID

a. At the annual meeting following a year during which a school has been under supervision, the high school board, taking into consideration the report of the inspector, the report of the examiner, and such other information as may be at hand, shall grant state aid to schools whose work and organization are satisfactory and give promise of permanency. By provision of the law, no school receives aid in excess of the amount expended in carrying out the purposes of the act, exclusive of the cost of buildings and repairs thereon.

b. The high school inspector shall report on the yearly expenditure of each high school. The special report shall include:

(1) The part of the superintendent's annual salary in excess of $600.

(2) The salaries of high school instructors. In case of instructors giving part time to high school work, proportionate credit shall be given, but in case the eighth grade is combined with the high school for purposes of instruction, the entire salary of at least one instructor shall be charged to grade work. No part of such salary shall be counted in reckoning high school expenditure.

(3) The cost of library fixtures and library books. No credit shall be given for expenditure already balanced by gift or by state aid to school libraries. School boards are at liberty, of course, to make any purchase they may desire, but no credit shall be given for the purchase of subscription books or expensive sets unless the inspector's approval shall have been secured prior to such purchase. Free texts for ordinary class use shall not receive credit.

(4) The cost of laboratory fixtures and apparatus. No credit shall be given for charts, for unusual or expensive apparatus, for sets of apparatus, or for any devices sold by traveling agents, unless the approval of the inspector shall have been secured prior to such purchase.

[1] State of Minnesota, *Department of Education Bulletin* no. 45. May, 1913.

3. REMOVAL FROM THE LIST

Schools failing to comply with these regulations or not maintaining the required standard of efficiency may be dropped from the list. The inspector shall advise the local superintendent and the clerk of such possible action.

4. REQUIREMENTS FOR ADMISSION TO STATE HIGH SCHOOL LIST

a. A suitable building providing not less than five grade rooms below the high school, and high school quarters consisting of at least an assembly room, a recitation room for each instructor, a laboratory and an office. The conditions for health and other sanitary appointments, including toilets, water supply, and disposal of sewage shall conform to the rules made by the superintendent of education. All school buildings hereafter constructed, remodeled or enlarged shall be equipped with a fan system of ventilation, sanitary drinking fountains, and flush toilets. Plans for new buildings or for reconstruction of old buildings must be submitted to the superintendent of education for approval before contract is let or work begun, according to provision in Section 6, Chapter 550, Laws of 1913.

b. A well organized graded school, having not less than five distinct departments below the high school, and including not less than eight grades of elementary school instruction.

c. An observance of the rules for the equipment of a graded school.

d. A qualified superintendent having general charge of grading, instruction, discipline and care of building.

e. A liberal schedule of salaries.

f. Classes in four years of high school work, with a good prospect of classes to follow in regular succession.

5. CONDUCT OF THE SCHOOL

a. Students admitted to the high school shall have satisfactorily completed the common school branches.

b. Permanent records shall be kept to show where each grade pupil belongs, and what work each high school student has completed. A system of card records is recommended. Special and annual reports are to be made by the superintendent and the clerk to the state inspector and the county superintendent of schools.

c. The school shall hold sessions of not less than nine months each year.

d. The high school shall be open, free of tuition, to non-resident pupils upon passing the examination required by law.

NOTE: This rule does not apply to industrial departments for which special aid is granted.

e. The high school department shall be placed in charge of a qualified principal. Not counting the superintendent, or the industrial teachers for whose departments special aid is granted, a special instructor shall be provided for each 30 students or major fraction thereof. In addition to the superintendent, every school shall employ at least two teachers, who shall give their full time to high school work.

f. The superintendent shall be provided with an ample recitation room and an office. He shall have reasonable time in school hours for general supervision and shall teach not to exceed four classes daily, laboratory subjects to count double.

g. School boards shall adopt a liberal policy in supplying the following library facilities and scientific equipment as rapidly as classes come forward to need them:

(1) Material in sets for a four years' course in high school reading.

(2) A botanical or zoological outfit of tables, inexpensive dissecting microscopes, one compound microscope, dissecting instruments, glass jars and alcohol or formalin for preserving material, etc.

(3) Apparatus and equipment adequate to carry on a year's work in physics as outlined in manuals.

(4) Suitable desks, chemicals and glassware for a year's work in chemistry.

(5) A working school library for the use of students in the preparation of their daily work. It is better to equip the classes one or more at a time, and equip each thoroughly, than to scatter a small appropriation. The principal subjects which require assistance from a working library are: English literature, general history, civics, political economy, senior American history, senior geography, physiography, chemistry, physics, zoology, botany, foreign languages.

h. The school board of each school shall issue diplomas to those students who shall be certified by the superintendent to have completed in a creditable manner the preliminary subjects and the work covered by twelve high school credits, a four years' course in English, reading and composition. A year's work in a subject is a credit.

i. The superintendent shall receive a salary of not less than $1,200 a year. High school instructors shall be paid not less than $540 a year.

j. The qualifications of teachers shall be those prescribed under "Requirements in Regard to Certificates of Teachers in High and Graded Schools."

k. Before entering into contracts or paying salaries, school boards shall require all teachers and instructors to present their certificates to the superintendent for inspection and record. He shall keep this record on file in his office and shall furnish a copy of the same to the clerk of the school board.

GRADED SCHOOLS

1. APPLICATION FOR STATE AID

a. Applications for state aid shall be made on the official blank not later than October 1st of the first year for which aid is asked.

b. Applications will be considered by the state high school board at its annual meeting, when the inspector will report on schools whose applications have been received.

2. REMOVAL FROM LIST

Schools failing to comply with the requirements or neglecting to maintain a satisfactory standard of efficiency may be dropped from the list. The inspector shall advise the clerk or other officer of the school board of such possible action.

3. BUILDINGS

a. Suitable grade rooms for not less than four departments must be provided.

b. The system of ventilation shall conform to the rules and regulations issued by the Superintendent of Education.

c. New and remodeled school buildings of eight rooms or more must be equipped with a fan system of ventilation, sanitary drinking fountains, and flush toilets. Plans for new buildings or for reconstruction of old buildings must be submitted to the superintendent of education for approval before contract is let or work begun, according to provision in Section 6, Chapter 550, Laws of 1913.

4. CONDUCT OF SCHOOLS

a. The school shall be in session nine months each year.

b. Regular and orderly courses of study for eight grades, embracing all such branches as may be prescribed by the high school board, shall be maintained.

c. The principal shall exercise general supervision over the school, direct the work of teachers, determine the grading, prescribe and give examinations, and perform such other duties as the school board may require.

d. Permanent records must be kept showing age, attendance, scholarship, and promotion of pupils. Special and annual reports are to be made by the principal and the clerk to the state inspector and the county superintendent of schools.

e. The seating capacity of each school room shall be determined by allowing not less than eighteen square feet of floor space per pupil.

f. The qualifications of teachers shall be those prescribed under "Requirements in Regard to Certificates of Teachers in High and Graded Schools."

g. The salary of a principal of a graded school shall be at least $700 a year.

h. The salary of a grade teacher shall be at least $450 a year.

NOTE: The salary limit stated above becomes effective September, 1914.

i. Before entering into contracts or paying salaries, school boards shall require the principal and teachers to present their certificates to the clerk for inspection and record. He shall place such record on file, after having satisfied himself that the principal and teachers are legally qualified and have complied with all the requirements of the high school board.

5. EQUIPMENT

Each school shall have:

a. A library of at least 500 volumes, containing all needed reference books together with special libraries for grade work in history and geography. Additions must be made each year and not less than twenty-five dollars shall be expended annually for this purpose.

b. Necessary wall maps, charts and globes for work in history and geography.

c. At least three sets of supplementary readers for each grade.

d. An international dictionary or its equivalent, and several copies of smaller dictionaries for use in intermediate and grammar grades.

NOTE: In order that there may be some uniformity as to what constitutes a satisfactory equipment, it is suggested:

1. That for work in geography each school be supplied with a globe, preferably one suspended from the ceiling and not less than eighteen inches in diameter, and the following maps: The world on Mercator's Projection, the Eastern and the Western Hemisphere, the United States, North America, South America, Europe, Asia, Africa, Australia, Minnesota. The three first named should be of a larger size than the remaining seven.

2. That for work in United States history each school be provided with a large outline map of the United States painted on slated cloth. With the aid of colored crayons very effective use can be made of this map.

3. That the supplementary reading be made up wholly of books not arranged in series for grades.

4. That one International Dictionary, or its equivalent, be considered sufficient for a school of six departments or less.

5. That pupils be encouraged to purchase small dictionaries after they have been admitted to the fourth grade, and that, in places where it is considered inadvisable to make this requirement, the school board furnish one dictionary for every four pupils above the third grade.

6. REQUIREMENTS FOR SPECIAL GRANT $500 FOR HIGH SCHOOL DEPARTMENT

In addition to meeting the preceding requirements each school shall

a. Have a suitable building of not less than six rooms, including a laboratory.

b. Employ not less than six teachers during the entire year for which aid is granted.

c. Provide the principal a suitable office in addition to his regular recitation room, and allow him not less than two periods daily during school hours for general supervision.

d. Place the assistant principal in charge of the high school department, including grammar school students seated in the room.

e. Pay the principal a salary of not less than $1,000 a year, and teachers doing high school work, not less than $540 a year.

NOTE: The salary limit of the principal becomes effective September, 1914.

f. Enroll not less than fifteen pupils in the high school department.

g. Maintain classes in not less than two years of high school work of such character that it will admit students to the third year of any state high school.

h. Adopt a liberal policy in making provision to supply the following library facilities and scientific equipment as rapidly as classes come forward to need them:

(1) Material in sets for a four years' course in high school reading.

(2) A botanical or zoological outfit of tables, inexpensive dissecting microscopes, one compound microscope, dissecting instruments, glass jars and alcohol or formalin for preserving material, etc.

(3) Apparatus and equipment adequate to carry on a year's work in physics as outlined in standard manuals.

(4) Suitable desks, chemicals and glassware for a year's work in chemistry.

(5) A working school library for the use of students in the preparation of their daily work. It is better to equip the classes one or more at a time and equip each thoroughly, than to scatter a small appropriation. The principal subjects which require assistance from a working library are: English literature, general history, civics, political economy, senior American history, senior geography, physiography, chemistry, physics, zoology, botany, foreign languages.

i. Require the completion of work necessary to obtain sixteen credits before issuing a diploma to any of its students. A year's work in a subject is a credit.

SCHOOLS RECEIVING $2,500 AND $1,800 INDUSTRIAL AID

The following rules apply to both classes of schools, except as specifically stated.

1. APPLICATION FOR STATE AID

a. Applications shall be made before the first day of August of the first year for which aid is asked on the blank form prepared for the purpose.

b. Each school must be listed provisionally by the high school board before it begins work. If at the end of the first semester it has complied with the conditions, it shall be officially designated for that year.

c. Each school district of less than eighteen sections listed for the $2,500 aid is required to effect association with rural school districts so as to embrace within its territory at least eighteen sections.

2. AWARD OF AID

a. The annual award shall be made at the regular August meeting of the high school board and shall be based on a compliance with the statutes and the rules of this board relative to amount of aid for which the school has qualified.

b. Each school qualifying for $2,500 aid shall receive not exceeding $2,500 per year, and in addition thereto $150 per year for each associated rural school district,

but in no case shall the total amount received by any such school exceed two thirds of the sum actually expended upon such agricultural and industrial department as certified to the state high school board.

c. Each school qualifying for $1,800 aid shall receive not exceeding $1,800 per year, and in addition thereto $150 per year for each associated rural school district, but in no case shall the amount awarded exceed the actual expenditure of the school for an agricultural department and a department of home economics or manual training as certified to the high school board.

d. In reckoning aid, credit shall be given for

(1) Salaries of special instructors—in case part time is devoted to this work corresponding credit shall be given.

(2) Equipment, including tools and apparatus.

(3) Supplies, including seeds.

(4) Labor and team work.

(5) Reference books.

(6) Extension work in rural schools and among farmers.

(7) Transportation of instructors.

3. COURSES OF STUDY

a. The industrial courses required by law and covered by these rules shall be maintained throughout the school year.

b. The work in agriculture shall include:

(1) A course based on textbooks, bulletins, and lectures. Agronomy and animal husbandry shall be given not less than a year each. It is desirable that botany, chemistry, zoology, and physics should be given an agricultural trend, but these subjects shall not be counted as a part of the four-years' course in agriculture.

(2) A general course of one year to include gardening, fruit growing, dairying and poultry raising.

(3) A laboratory course, including physical examination of soils, preparation of weed-seed cases, testing of seeds, testing for butter fat, grain judging, stock judging, etc.

(4) Special work along some line of local interest, such as dairying, corn breeding, small grain, potatoes, fruit, meat products, poultry, etc. The school shall not only maintain a standard of general efficiency, but shall develop strength in chosen specialty.

(5) The organization of institute work in coöperation with extension division of the College of Agriculture of the State University.

(6) A short course of three months. In case local conditions are unfavorable, the course may be discontinued with the written consent of the inspector.

4. INSTRUCTORS

a. In a school receiving $2,500 aid the corps shall include not less than three special instructors, one qualified to teach agriculture, one shop work, and one home economics. The entire time of each instructor shall be devoted to his department.

b. In a school receiving $1,800 aid two industrial instructors shall be employed, one qualified to teach agriculture and one to teach either home economics or manual training. These instructors shall be in addition to the instructor per thirty students required for state high school aid.

c. The principal of a graded school having not to exceed five grade teachers may teach one industrial subject. In such case he must have the qualifications of an industrial teacher.

d. The agricultural instructor shall be employed for the full calendar year of twelve months. The year of employment shall begin August 1st. His entire time shall be given to the teaching of agriculture and extension work, provided that in schools receiving $1,800 aid the instructor in agriculture may with the written consent of the inspector be permitted to teach one additional subject, particularly one related to agriculture. This rule shall not prevent the principal of a graded school from acting as instructor of agriculture.

e. The instructor shall be provided with laboratory facilities. During the fall and the spring of the year he shall have not less than a continuous half day for outside and extension work. He shall make a close study of local conditions and attend markets, horticultural meetings, meetings of creamery and stock-breeding and other associations, and such other gatherings as afford opportunity to make the acquaintance of farmers.

f. The instructor in agriculture may not direct manual training, but in schools receiving $1,800 aid instructors in manual training or home economics may, if qualified, devote part time to academic work. The work in home economics may be divided between two instructors, one for sewing and the other for cooking.

g. The legal qualifications of instructors shall be those prescribed under "Requirements in Regard to Certificates of Teachers in High and Graded Schools."

5. DEMONSTRATION PLOT

Each school receiving $2,500 aid shall maintain a demonstration plot of five acres or more. This plot shall be owned by the school district or be held under a long lease. It must be kept free of weeds and in a state proper for cultivation and for demonstration purposes. The border shall be seeded down into a sward. A part of the plot shall be devoted to a permanent rotation of field crops of which a record shall be kept by the instructor.

6. EQUIPMENT

a. Agriculture. The instructor shall have one or more rooms exclusively for his work. The classroom shall be equipped with a well-arranged reference library, including bulletins, and facilities for displaying agricultural products. The laboratory shall be provided with apparatus for testing soils, milk, and seeds. The agricultural quarters shall be easily accessible to visitors or persons bringing in farm products. An outside entrance is desirable.

b. Home Economics

(1) In schools receiving $1,800 aid a special room shall be fitted up with tables, cooking utensils, table service, cupboards, and conveniences for storing kitchen supplies. An adequate equipment shall also be provided, including cutting tables, one or more sewing machines, material suitable for patterns, the materials required for exercise, and such implements as are required in the usual sewing room.

(2) In schools receiving $2,500 aid the quarters shall include a dining room or administration room, a kitchen laboratory, and a room equipped with tables and machines for sewing.

c. Manual Training

A special room for woodwork shall be provided with benches and the necessary tools. Material for exercises shall be supplied free of charge. Lumber for articles taken home may be charged for at cost. Schools receiving $2,500 aid shall provide facilities for blacksmithing.

d. The rooms used for industrial purposes must be approved by the inspector. Where but one room is used for a department not less than 700 square feet of floor space shall be considered adequate, and all rooms must be properly lighted and well ventilated.

e. Schools receiving $2,500 aid shall maintain a farm building large enough to store supplies, tools, and machinery, in case the plot is remote from school building.

7. CREDITS

If the work be done satisfactorily, two periods given daily to an industrial subject or subjects for one year shall count as a credit.

Circular No. 3, 1913

To Superintendents and Principals of High, Graded, and Consolidated Schools:

Relating to Industrial Departments in high, graded, and consolidated schools and to Training Departments in high schools.

State Aid

Industrial.—For departments in agriculture, home economics, and manual training, under Chapter 82, Laws of 1911, as amended during the present session.....$2,500

For departments in agriculture and either home economics or manual training under Chapter 91, Laws of 1911, as amended during the present session....$1,800
(Present aid, $1,000)

For training departments for rural teachers—applicable only to high schools....$1,000
(Present aid, $750)

The present Legislature has also approved an act increasing the annual aid for high schools from $1,750 to $2,200, and for graded schools from $600 to $750. This increase does not apply to the present school year, but will be included in the distribution of aid in 1914. The same rule applies to the increase in the industrial aid from $1,000 to $1,800, and that for training departments from $750 to $1,000. For the present school year the special aid will be allowed on the basis of the amounts provided in the old law.

At its meeting on April 5, the High School Board voted:

1. That high schools, graded schools, and consolidated schools be notified of the requirements fixed by recent legislation for earning annual aid of $2,500, $1,800, and $1,000.
2. That schools desiring to continue present special departments, or to establish such departments next school year, be requested to make application in writing to the State Superintendent, or one of the Inspectors.

Schools maintaining any of these departments during the present school year, as well as those planning to establish industrial or training departments for next school year, will file their application with the State Superintendent, or with one of the Inspectors, prior to May 1. Proper blank applications are sent with this letter.

In order that schools may understand the requirements of the law, and the rules of the High School Board applicable to industrial and training departments, there are forwarded with this letter copies of the laws in their existing form, as amended by the present legislature. The new part of the law is indicated in bold type.

Schools Receiving $2,500 Industrial Aid

(Chapter 82, Laws of 1911, as amended at present session)

The general provisions of law and the requirements of the State High School Board are practically the same as they have been in the past.

In order, however, to increase the usefulness of the industrial departments, slight modifications have been made, to which attention is called. The High School Board, in considering the school demonstration plot, has concluded to require that this shall be owned by the school board or held under a long lease. In this way it will be possible to carry on consecutive work, which ought to prove of value to the community. The Board has also deemed it advisable to require of the schools that the facilities for kitchen and sewing shall include a dining room or administration room, a kitchen laboratory, and a room equipped with table and machines for sewing.

Special attention should be paid at this time to the rule of the High School Board which provides that the agricultural director shall be employed for the full calendar year of twelve months, and that the year of his employment shall begin August 1st.

Schools Receiving $1,800 Industrial Aid

(Chapter 91, Laws of 1911, as amended at present session)

Under this act each school is required to maintain a department of agriculture and also a department of either home economics or manual training. The present legislature has increased the amount of state aid from $1,000 to $1,800. These schools are entitled to the benefits under the association feature and the tuition feature, which the previous law accorded only to the schools drawing $2,500 state industrial aid. In addition to the regulations which have governed this class of schools, it should be noted that in each high school, two industrial teachers, in addition to the instructors per thirty students required for the state high school aid, shall be employed. It is also well to remember at this time that the instructor in agriculture must devote his entire time to the teaching of agriculture and to extension work. In schools where the agricultural work is exceptionally light, the inspector under whose charge the school is placed is authorized to allow the instructor to teach an additional subject, particularly one related to agriculture. The written permission of the inspector must be secured, however. The technical qualifications of instructors in these departments must be adhered to rigidly, and no requests should be made to the State Superintendent for a special permit, unless the application is one of exceptional merit. In every case it seems proper that the school board or superintendent shall present the request for a special permit for the instructor, rather than expect the instructor to make the application.

In order that the instructor may have ample facilities for doing his work, it is necessary that he should have a laboratory for the exclusive use of his department. During the fall and spring of the year he should be given a continuous half day for extension work and outdoor work in connection with his department.

High School Training Departments Receiving $1,000 Aid

(Section 1420, Revised Laws, 1905, as amended at present session)

Aid for training departments is increased to $1,000, but only such amount will be awarded as is spent for the department. Credit will be given for the amount expended, under the following heads:

1. Salary of the instructor
2. Equipment of the room
3. Expenditure for department library
4. Transportation of teachers and students visiting the rural schools.

Otherwise, the rules remain without material change.

April 15, 1913. C. G. SCHULZ,
Superintendent.

The Rules of the State Department of Public Instruction governing rural school aid at the time of this study are reproduced herewith.

STATE AID, JANUARY, 1913—BULLETIN NO. 40

STATE OF MINNESOTA

DEPARTMENT OF PUBLIC INSTRUCTION

Rules and Regulations Governing semi-graded schools, and rural schools of Classes A, B, and C, applying for state aid

1. SEMI-GRADED SCHOOLS

To be entitled to state aid of $300.00, the law and the regulations of this Department require:

1. School Term. Must be not less than eight months in each department during the year.
2. Teachers. The principal must hold a state first grade common school certificate, or one of higher rank, during the entire school year, and must have had sixteen months of successful teaching experience. Each of the other teachers must hold at least a state second grade common school certificate. Limited, or county certificates, are not sufficient.
3. School Buildings. Must be suitable for school purposes, clean and well kept. Each entrance must be provided with foot scrapers and cocoa or steel mats.
4. Equipment. Each school must be provided with the following:
   a. Blackboard. At least 100 square feet for each room.
   b. Unabridged Dictionary. Must be Webster's International, the Standard, or the Century.
   c. Abridged Dictionaries. Several copies—not less than five—of an abridged dictionary like Webster's Academic.
   d. Supplementary Readers. At least two complete sets of supplementary readers for each class or grade, in addition to the regular basic readers.
   e. Maps. A complete set of eight maps, and a state map, mounted on spring rollers, in a case—preferably a rotary case.
   f. Globe. A good twelve inch globe—suspension globe preferred.
   g. Desks. Each school must be equipped with suitable seats and desks, properly arranged and graded according to age and size of pupils. Only single desks should be used.

h. Primary Material. Ample material for seat work in primary grades must be provided. The original expenditure should not be less than $10.00 and worn-out material should be replaced without delay.

5. Library. Each school must have a well-selected library, suited to the school. Additions to the amount of $15 annually must be made. If the district purchases $15 worth of library books under the library law, the state will meet half this expense. Library books must be ordered before school begins, so that the pupils may have the benefit of them during the school year.
6. Heating and Ventilation. Each school building must be adequately heated and ventilated in one of the following ways: The system must be constructed and installed in accordance with the requirements of this Department as defined in Appendix A of this bulletin.
   a. Steam plant.
   b. Basement furnace.
   c. Patented system of room heating and ventilation.
   d. Home-made system of room heating and ventilation.

NOTE: See Appendix A for detailed specifications and requirements.

7. Outhouses. For all schools not having indoor closets, the school board must provide and keep in good repair and in a cleanly and healthful condition two separate outhouses near the rear of the school grounds and concealed by lattice work and shrubbery. The buildings should have sufficient light and be supplied with sufficient toilet paper. They should be coated inside and outside with paint containing sand. The boys' outhouse should be provided with suitable urinals.
8. School Grounds. Must be clean and present an orderly and attractive appearance. Every effort should be put forth to beautify the school grounds by planting choice trees and shrubs. Care should be taken that the school grounds are kept free from weeds, ash piles, and other rubbish.
9. Drinking Facilities. The water supply should be carefully safeguarded, as this is frequently more than any other one thing about the school a potent source for the spread of disease.

   A large earthen jar with tight cover and self-shutting faucet may be used. In this case each child should have his own drinking cup and use no other. The common drinking cup and water pail are prohibited by the State Board of Health.

   A better plan still is to provide a sanitary drinking fountain. This does away entirely with the use of drinking cups and there is a less opportunity for the spread of contagious disease. A good gravity bubbler drinking fountain can be obtained for about $20 and will last indefinitely.
10. Progress. Each school must show that it has attained a high standard of efficiency and has made marked improvement during the year.

II. RURAL SCHOOLS

Class A

1. School Term. The school term must be not less than eight months during the year.
2. Teacher. The teacher must hold a state first grade common school certificate, or one of higher rank, from the beginning of and through the entire school year.

3. Library. Each school must have a well selected library suitable for the school. Books purchased under the library law must be added annually to the amount of at least $10. If the school purchases $10 worth of library books under the library law, the state will meet half the expense.

NOTE: In all other respects the requirements for Class A are the same as for semi-graded schools.

Class B

The requirements for Class B rural schools are the same as for Class A, except that the teacher may hold a state second grade common school certificate in place of a first grade. This she must have from the beginning of and through the entire school year.

Class C

The requirements for Class C Rural Schools are the same as for Class B, except that the school term is seven months.

(Pages 3 to 6 inclusive, *Bulletin No. 40*, Minnesota Department of Public Instruction, January 1913)

RULINGS OF THE STATE HIGH SCHOOL BOARD AND THE STATE DEPARTMENT OF PUBLIC INSTRUCTION

I. High Schools

NOTE 1. The Board specified that the course of a high school should include elementary algebra, plane geometry, physiology, natural philosophy, English composition, general history, Latin grammar and reader, two books of Cicero's Commentaries, "the writing of English in connection with the foregoing studies, with special reference to correct punctuation and use of capitals, also exercises in reading and declamation. When practicable, instruction in vocal music and drawing shall be added. For a full classical course an examination in the Greek grammar and reader will also be required, and by students taking this course, natural philosophy, physical geography, and physiology [not mentioned before] may be omitted." (Minutes of the State High School Board, April 18, 1878.)

NOTE 2. The secretary is mentioned as the examiner (Minutes of the State High School Board, April 16, 1880) but the minutes clearly show that the different members of the Board, as well as several of the University faculty, were paid for acting in such capacity.

NOTE 3. The Board required of those persons wishing to enter the high school examination in "orthography, reading, penmanship, arithmetic, English grammar, modern geography, United States History." The questions were sent out by the High School Board. (Minutes of the State High School Board, April 18, 1878.)

NOTE 4. The Board did not put a limit upon the time which should be devoted to this high school work but suggested that it be not less than two years. (Minutes of the State High School Board, April 29, 1878)—"non-resident pupils upon application must be admitted without charge for tuition if they can pass the examination prescribed." (Circular No. 1, State High School Board, 1878.) The Board directed that all examination questions should be made out by the state university and that the answers be marked by heads of the respective departments of the University. (Minutes of the State High School Board, May 5, 1879.)

On account of the lack of appropriation for one year the High School Board in 1879 decided to select schools to be aided upon the basis of:

1. Date of application of the school.
2. Location of the school in the state.

3. Population of the districts adjoining the school.
4. The greatest good to the state to be subserved by the appropriation. (Minutes, May 5, 1879.)

There was some doubt as to the Board's right to impose such conditions. The Board conferred with the attorney general. (Minutes of May 12, 1879.) In his decision, dated May 13, the attorney general stated that the Board had no right to exercise any discretionary powers but was to accept "all public graded schools"—"In the order of their application." (Minutes of May 13, 1879.)

NOTE 5. In May 1881 the following regulations were adopted:

1. All districts receiving aid for high schools must maintain three departments below the high school corresponding to the primary, intermediate, and grammar departments, or their full equivalent.

2. Departments were to be graded "in view of the attainment and ability of pupils, having definite courses of not less than seven years total, not less than one competent teacher, and a comfortable room for each department, furnished with suitable seats, blackboards, and other agencies of successful instruction.

3. "There shall be a class in the high school, as the basis of state aid, consisting of not less than five members on the average for the term of the school year. This class shall pursue a course of study prepared by the High School Board, and the members thereof shall declare a purpose to complete their course; and no person shall be admitted to this class who has not passed a satisfactory examination under the direction of the Board of Education of such high school; such examination to be of sufficient extent and thoroughness to establish the ability of the applicant to pursue successfully the grades of the course. Instruction may be given to this class as well as to the other classes of the school in studies not included in this course, provided that such other studies do not interfere with the successful prosecution of the 'prescribed course.' "

4. "The teacher or teachers of this class shall furnish the High School Board satisfactory evidence of scholarship sufficient to teach successfully all the branches included in the prescribed course of study."

5. The school was obliged to accept non-residents into any of its departments if the applicant held a third grade certificate. All departments were obliged to have at least eight months of school.

6. " . . . the class which is the basis of state aid shall be examined in the last term of each school year by the President of the University or an examiner approved by him."

The course of study adopted by the High School Board was: first year, arithmetic, elementary algebra, English grammar, geography, United States history, Latin grammar and reader; second year, natural philosophy, physical geography, elementary astronomy, general history, plane geometry, physiology, Caesar completed, Cicero begun; third year, elementary chemistry, geometrical drawing, botany, ancient history, algebra to quadratic equations, solid geometry, Cicero completed, Vergil completed. Exercises were made obligatory in reading, writing and public speaking throughout the course and when practicable instruction in vocal music and freehand drawing. The time which the course should take was not limited except that it should not be less than three years. Successful completion of the above course, as attested by final examination of the Board, admitted to the freshman class of the University in the scientific course. "The schools desiring to enable pupils to prepare for classical courses will modify the above course as follows:

(1) For the scientific studies of the second year substitute Greek grammar and reader, and

(2) For the scientific studies of the third year substitute Xenophon's *Anabasis* with the usual collateral."

"The work of the third year of the course will not be exacted as a condition of aid until after further notice from this Board. The completion of the first two years will secure admission to the sub-freshman class of the University." (Minutes of the State High School Board, May 2, 1881.)

NOTE 6. When a school's application was accepted the school was entitled to aid upon completing its organization in the following respects:

1. The principal was to be a graduate of a college, university, advanced course of a normal school, or must have passed satisfactory examination in the studies taught in the department.

2. All pupils received into the high schools were required to pass satisfactory examination under the direction of the principal or the superintendent of the school, in reading, fourth reader; spelling, the same; arithmetic, including operation in the fundamental rules, decimal fractions and compound numbers; grammar, syntax and etymology of Green's Introduction, or its equivalent; geography, including a general knowledge of the location of the political divisions and climate of the world, and also a fuller knowledge of United States History.

3. The high school was to consist of at least twenty pupils and be provided with a separate room and teacher.

4. At the close of each term reports were to be made out by the principal to the secretary of the board as follows:

(a) of the names of all students received, together with the standings of each student in the branches in which examination is required.
(b) of the whole number attending.
(c) of the number in each class.
(d) of the classes prepared for examination.
(e) of the money expended in support of the high school departments. (Minutes of the High School Board, October 27, 1881.)

NOTE 7. It is definitely stated that the standings of schools was determined by

1. The certificate of the principal.
2. The "term" reports of the principal.
3. The reports of the visitors.

(Minutes of the State High School Board July 19, 1883.)

NOTE 8. Pursuant to an inquiry from "the convention of superintendents and principals" the Board passed the following resolution: "That the amount of $400 appropriated by this board under the statute should be expended for the purposes named in the statute, viz: for the encouragement of higher education; that for the purpose it should be set apart and not used to defray the general expenses of the schools; that the secretary be directed to require a report of the expenditure at the close of the year." (Minutes of the State High School Board, September 22, 1884.)

NOTE 9. In 1885 the High Schools under the inspection of the State High School Board were divided into three classes: First class, schools that met the following requirements and conditions:

1. Thoroughly organized elementary grades, pupils graded and regularly promoted, departments carefully superintended, and records kept.

2. Thorough and complete preparation for the high school.

3. The high schools were to be provided with apparatus for natural philosophy and chemistry sufficient for the course of study, and properly arranged and well kept.

4. The course of study in the high school was to be pursued continuously in all years preparatory to the University. Final examinations were to be held in all

subjects and "a reasonable percentage of certificates received." Graduations were to be made only upon the completion of the course and upon the certificate of final examination of the High School Board.

5. The high school was to be provided with a library of books of reference and of general reading in history, biography, literature, and travel, such as was required by students in the pursuit of their studies and for their general information.

The second class included all schools that were making decided progress in their organization, equipment, and supervision in all respects, although they had not yet reached the standards required for the first class.

The third class included the schools in the "experimental stage" having the following general characteristics:

1. Imperfectly graded elementary department.

2. Preparation for high school imperfect in scholarly attainments and in command of the elements of English in reading, composition, and arithmetic.

3. Not adequate supply of apparatus and books.

4. The course of study confined to the first and second years.

The President of the University and the Superintendent of Public Instruction were made a committee to classify the schools annually. Schools of the third class were to make improvement sufficient for promotion "within a reasonable time." (Minutes of the State High School Board, May 16, 1885.)

NOTE 10. In 1886 classification rules were changed in the following particulars:

1. High schools of the first class were required to give final examinations only in those subjects required by the board.

2. Classification of the schools hereafter was to be made for three years subject to revision in the discretion of the State Board.

3. The third class of schools was required to do only two of three years of work prescribed by the Board. (There is no record of division of the previously named subjects according to the years of the course.) (Minutes of the State High School Board, November 17, 1886.)

On August 26, 1889, Number I of the rules passed November 17, 1886 was rescinded.

NOTE 11. "After the present scholastic year no high school shall be credited with an enrollment of any pupils who have not passed the preliminary examination in orthography, arithmetic, geography, and United States history. All others in the high school shall be reported as conditioned and shall not be graduated without having passed in these branches." "—all examination papers shall be first examined as to penmanship and orthography and any paper not deserving a mark of 65 in spelling shall be thrown out without further examination than spelling." (Minutes of the State High School Board, December 22, 1891.)

NOTE 12. On May 22, 1893, the Board voted to accept state teachers' certificates in the place of the certificates of the Board. The legislature of this year provided for more thorough inspection of the schools. The Board at this meeting provided formally for an inspector to act as its agent and fixed his salary at $2,000 per year. On June 29 following, George B. Aiton was elected as Inspector of High Schools.

NOTE 13. On November 18 of the same year the following recommendations were made by the Inspector and adopted by the Board:

1. "That local boards be required to provide and adhere to a four-year college preparatory course as an essential feature of their high school work.

2. "That boards of education be required to provide their superintendents with adequate office facilities, and to enable them to devote reasonable time to supervision.

3. "That high schools of the first class be required to provide library facilities and to employ methods of instruction calculated to give power to use the same, in the study of English literature, history, and kindred subjects; also that schools of this class be required to provide laboratory facilities, and to employ methods of instruction on systematic individual laboratory work in the sciences—particularly in physics, botany and chemistry.

4. "That schools accepted for supervision be known as 'schools under supervision,' and be not listed as high schools until they have been authorized to receive the special high school appropriation." (Minutes of the State High School Board, November 18, 1893.)

NOTE 14. On September 10, 1896 the Board voted that city superintendents would not be required to hold state certificates unless they were to teach classes in addition to performing the duties of a superintendent.

NOTE 15. On the recommendation of Mr. Aiton the following was adopted by the Board:

1. Classification into first, second, and third classes was abolished "and the inspector shall characterize the schools, either singly or by groups, both as to general efficiency and as to excellence in particular subjects."

2. State examinations were made optional "except that the inspectors may require any school to take the regular state examinations as a part of their instruction." (Minutes of the State High School Board, July 12, 1897.)

NOTE 16. Rules and Regulations of the State High School Board.

Organization of the Board

1. The Governor shall act as President of the Board, the Superintendent of Public Instruction shall act as Secretary, and the President of the State University shall act as examiner.

2. An annual meeting of the Board shall be held in August, as soon as practicable after the close of the fiscal year.

3. Special meetings may be held at the call of the Secretary.

Application for State Aid to High Schools

1. All applications for state aid shall be made to the Secretary of the Board on the official blank prepared for that purpose, and shall be made not later than August 1 preceding the school year for which aid is requested.

2. All applications shall be considered at the annual meeting of the Board, and schools considered worthy shall be accepted for supervision. Applications shall be considered at special meetings only in cases where delay in making application appears to have a valid reason.

3. The applications of schools accepted for supervision shall be referred to the high school inspector, whose duty it shall be to visit such schools during the ensuing school year and to submit a special report to the high school board at the next annual meeting.

4. At the annual meeting following a year during which a school has been under supervision, the high school board, taking into consideration the report of the inspector, the report of the examiner, and such other information as may be at hand, shall grant state aid to schools whose work and organization may appear to be satisfactory and to give promise of permanency.

5. A state high school is defined as a school which has received state aid to high schools and which is under the supervision of the high school board. The acceptance of a school for supervision shall not confer a right to the name before state aid shall have been granted.

6. Schools whose terms of state aid have expired and which have made reapplication for aid, may be replaced on the list unconditionally or if unfavorable conditions come to the knowledge of the board, such as a change of local policy or the employment of a superintendent and instructors whose qualifications are not well known, the school may be accepted merely for supervision, and the question of a place on the list may be deferred until the next annual meeting.

Conditions Requisite for Acceptance

The following requirements are in accord with the past experience of the board and are made with a view to secure conditions which render efficient work practicable and give promise of permanence. The increase of state aid to $800 justifies great care in admitting schools to the list.

1. A comfortable building providing not less than four grade rooms below the high school, and high school quarters consisting of at least a main room, a large recitation room, a laboratory, and an office.

2. A well organized graded school, having not less than four distinct departments below the high school, and including not less than eight years of elementary and grammar school instruction.

3. A well chosen geographical library for the sixth and seventh grades.

4. An adequate library of American history for eighth grade work.

5. Suitable wall maps, a globe, and an unabridged dictionary for each of the upper grades.

6. A liberal supply of reading material in sets for each grade.

7. A well qualified superintendent having general charge of grading, instruction, discipline, and of the care of the building.

8. A liberal schedule of salaries. It is not the policy of the high school board to prescribe salaries, but in the light of experience the board expresses a want of confidence in the ability of a school to earn the state grant of $800 without salaries liberal enough to secure the services of a competent superintendent and instructors of approved experience. Experience also demonstrates that towns having a population of less than 1,000 people, and an assessed valuation of less than $200,000 are seldom justified in undertaking the expense of supporting a state high school.

9. Scholarly classes, well started in at least the first two years of high school work, with a good prospect of classes to follow in regular succession, to maintain a full four years' course.

Conduct of the School

1. Students admitted to the high school shall have satisfactorily completed the common school branches.

2. Permanent records shall be kept to show where each grade pupil belongs, and what subjects each high school student has completed.

3. The school shall hold sessions of not less than nine months each year.

4. A high school shall be open, free of tuition, to all non-resident pupils, upon passing the examination required by law.

5. The high school department (including grammar school students, if necessary) shall be placed in charge of a well qualified assistant.

6. The superintendent of the school shall be provided with an ample recitation room and office, and shall have reasonable time in school hours for general supervision.

7. Boards of education shall adopt a liberal policy in making provision to supply the following library facilities and scientific equipment as rapidly as classes come

forward to need them. The amounts named represent the cost of respectable beginnings for small classes.

a. Material in sets for a four years' course in high school reading, $50.
b. A botanical or zoological outfit of tables, inexpensive dissecting microscopes, one compound microscope, dissecting instruments, glass jars and alcohol or formalin for preserving materials, etc., $80.
c. Apparatus and equipment adequate to carry on a year's work in physics as outlined in the manual, $200.
d. Suitable desks, chemicals, and glassware for a year's work in chemistry, $90.
e. A working school library for the use of students in the preparation of their daily work. The amounts named below are sufficient, if expended with judgment, to equip the various classes fairly well. It is understood that none of these books are required until classes are formed that need them. It is better to equip the classes one or more at a time, and equip each thoroughly, than to scatter a small appropriation. The principal subjects which require assistance from a working library are: English literature, $100; general history, $100; civics, $40; political economy, $60; senior American history, $75; senior geography, physiography, $50; chemistry, $30; physics, $40; zoology, $50; botany, $75; foreign languages, $25, each.

8. The board of education of each school shall issue diplomas to those students who shall be certified by the superintendent to have satisfactorily completed the preliminary subjects and the work covered by twelve high school credits and a four years' course in reading. A year's work in a subject is called a credit.

Teachers' Qualifications

1. The superintendent and high school instructors shall hold professional state certificates of the first class. These certificates are issued by the state superintendent of public instruction on the basis of a written examination, or upon the presentation of a diploma from an institution of higher learning, as provided in Section 3749 of the General Statutes of 1894. To obtain a professional state certificate, candidates must have taught with success in the state for at least one year. All candidates not graduates of a full four years' college course adjudged equal to that of the University of Minnesota may obtain the professional certificate by examination only. Examinations under the direction of the state superintendent of public instruction are held by an examining board twice a year, at the State University near the close of the University summer school, in August, and again at the Capitol in St. Paul during the Christmas holidays. As stated in rule three this regulation does not apply to superintendents and high school instructors who have had successful experience in state high schools previous to the adoption of these regulations. Professional certificates from other states are not accepted.

2. Candidates who have passed the required examinations or who hold a college diploma as above defined, but who are debarred from obtaining state certificates only by want of experience or shortness of residence may have their diploma or record of examinations endorsed for one year by the secretary of the High School Board. Candidates thus debarred from obtaining a professional state certificate and desiring the endorsement of the secretary of the High School Board for a year must submit therewith a legal certificate or license issued by local authority.

3. Before entering into contract or paying salaries, boards of education shall require the superintendent and high school instructors to have their state certificates or diplomas or records endorsed by the secretary of the high school board with the

words, "valid for state high schools." Boards failing to comply with this regulation shall, at the discretion of the high school board, forfeit their claim to state aid, provided, however, that nothing in these rules shall operate to disqualify a present instructor, of known scholarship and successful experience in high school work from continuing to hold a position in a state high school.

State Examinations

1. State high school board examinations are offered to all schools in the state twice a year, beginning on the last Monday in January and the last Monday in May. (Not all subjects are offered at the mid-year examination.)

2. Ungraded schools arrange for examinations through their county superintendents. All other schools apply to the examiner of the state high school board for questions on blanks prepared by him for that purpose.

3. All examinations must be conducted in strict compliance with the rules of the examiner.

4. Examinations are optional for all schools, except that the inspectors may require examinations as part of their inspection.

By order of the State High School Board

J. H. LEWIS, *Secretary*

Department of Public Instruction.
St. Paul, August 8, 1899.

NOTE 17. "After 1903-4 no teacher will be accepted by the State High School Board as qualified to teach in such schools (specially aided high or graded) who has not at least a second grade state certificate, and no teacher shall be deemed qualified to teach above the sixth grade in such schools who has not at least a first grade state certificate." (Minutes of the State High School Board, August 23, 1902.)

NOTE 18. The High School Board allowed permits to be granted by the state superintendent to expert teachers to teach their specialties. (Minutes of the State High School Board, March, 1903.)

NOTE 19. By reason of a communication of August 21, 1903 from the attorney general the president of the Normal School Board was declared a member of the State High School Board, under Section 6, Chapter 86, Laws of 1895. (Minutes of the State High School Board, October 29, 1903.)

NOTE 20. "Resolved that first, after this year, no credit be given in the state-aided high schools for the cost of fuel; and second, that the boards of education be required to provide at least one high school instructor for each thirty students or major fraction thereof." (Minutes of the State High School Board, May 14, 1904.)

NOTE 21. On August 22, 1904 when special aid was distributed, out of the total of 151 high schools aided, eleven were allowed the state funds on the basis as stipulated by the rule of the preceding May, prorating their receipts to their expenditures. "Schools under the supervision of the State High School Board are required to employ teachers for primary grades who have had at least an elementary course in a state normal school or in professional training schools of rank equal to a normal school. This rule does not apply to teachers now at work in the primary grades of the schools, but is intended to regulate the employment of new teachers for such grades." (Minutes of the State High School Board, November 21, 1904.)

NOTE 22. "A graduate from the advanced course of Minnesota state normal school shall be accepted as superintendent of a state high school on the recommendation of the president of the normal school from which the student is graduated, the inspector of high schools, and the inspector of graded schools, provided that this recommendation is to be given only on satisfactory evidence that the applicant has

attained high standing as supervisor and instructor." (Minutes of the State High School Board, April 21, 1905.)

NOTE 23. Inspectors were instructed to report to the High School Board concerning the heating and ventilation of each school visited by them and request improvements where the same were found to be manifestly deficient. (Minutes of the State High School Board, December 11, 1905.)

NOTE 24. Upon the recommendation of the state high school inspector the Board voted that after the school year 1909-10 the minimum salary of the superintendents should be $1,000. (Minutes of the State High School Board, April 28, 1909.)

NOTE 25. On the recommendation of the state high school inspector, the following rule was adopted: "Every school shall employ at least two teachers in addition to the superintendent, who shall give their full time to high school work. (Minutes of the State High School Board, August 20, 1909.)

NOTE 26. Beginning September 1912, high school districts were obliged to pay their superintendent not less than $1,200 annually. (Minutes of the State High School Board, January 22, 1901.)

NOTE 27. After September 1912 the following rules were to be null and void: "Teachers in grades from the second to the sixth, inclusive, shall hold at least second grade certificates, teachers of seventh and eighth grades shall hold at least first grade certificates." In place of the above the following was to take effect September 1, 1912: "Teachers of the second to the eighth grade, inclusive, shall hold at least first grade state certificates." (Minutes of the State High School Board, April 2, 1910.)

NOTE 28. "Resolved that the valuation and population of school districts which associate with a high or graded school under the Putnam Act shall be counted toward the valuation and population required by the rule of the High School Board for high and graded schools." (Minutes of the State High School Board, November 4, 1910.)

NOTE 29. On August 10, 1911 the requirement that a high school district have not less than 1,000 population was repealed.

NOTE 30. "Beginning with the school year 1912-13 no superintendent shall be employed in connection with a high school who has not had at least two years' experience as a teacher of graded work or in rural schools, or in supervising grade work. This rule shall not affect the reappointment of present superintendents." (Minutes of the State High School Board, October 25, 1911.)

NOTE 31. "In schools seeking to earn $2,500 industrial aid the director of agriculture shall give his entire time to agriculture and extension work; in schools seeking to earn $1,000, the director of agriculture shall give his entire time to agriculture and extension work, except that additional subjects, 'particularly those relating to agriculture' may be authorized by the state inspector." (Minutes of the State High School Board, April 13, 1912.)

II. Graded Schools

NOTE 32. Regulations for graded schools to receive $200 aid.

1. Applications considered in the order of their receipt.
2. Nine months session.
3. Each school to have not less than three "full-sized, cheerful, well-kept rooms."
4. Well organized graded school, having not less than three distinct departments.
5. Each school to pursue a course of study corresponding essentially to the graded course in the high school manual.

6. Upper or grammar school department to be open, free of tuition, to non-resident pupils, subject to regular entrance examinations at the discretion of the principal.

7. Each school to be "supplied with maps, dictionary, a globe, charts, primary material, and supplementary reading befitting an intelligent, progressive management."

8. "The school shall build up a library well supplied with books for the study of geography and American History."

9. It shall annually present a class, properly prepared for examination in the common branches.

10. "The annual apportionment of $200 shall be voted by this Board at the end of the school year upon evidence of satisfactory work."

11. "The principal shall hold a special certificate granted by the High School Board, which in addition to promise of professional success will require one of the following in evidence of scholarship:

a. a diploma of a reputable university or college.
b. the advanced diploma of a state normal school.
c. the diploma of a high school known for scholarship and giving a full four years' course.
d. a creditable examination in the common branches and such academic branches as may be required by this Board. (Minutes of the State High School Board, May 1895).

NOTE 33. A. W. Rankin was appointed Graded School Inspector. (Minutes of the State High School Board, August 8, 1896.)

NOTE 34. The Board passed a resolution to the effect that "Graded schools receiving $200 must maintain three departments throughout the year." (Minutes of the State High School Board, February 5, 1896.)

NOTE 35. It was directed that the principals of graded schools must hold a special certificate of the High School Board "issued to applicants of high character and successful experience," otherwise the requirements for such principals were the same as those designated May 3, 1895, except that at this time the Board reserved the right to issue a permit to an applicant eligible except for experience, and no more special certificates were to be issued. (Minutes of the State High School Board, August 17, 1896.)

NOTE 36. See the minutes of August 23, 1902, under High Schools.

NOTE 37. "Graded schools after July 31, 1903 must pay principals not less than seventy-five dollars per month and grade teachers not less than forty dollars." (Minutes of the State High School Board, May 13, 1903.)

NOTE 38. See Minutes of November 21, 1904 under High Schools.

NOTE 39. See Minutes of December 11, 1905 under High Schools.

NOTE 40. On August 20, 1907 a new set of rules governing the requirements for graded schools was adopted.

Ventilation—School buildings must be provided with a system of ventilation which shall meet the approval of the State Board of Health.

Equipment—Each school shall have:

1. Necessary wall maps, charts, and globes for work in history and geography.
2. At least one set of supplementary readers for each grade.
3. An International dictionary, or its equivalent, and several copies of small dictionaries for use in intermediate and grammar grades.

Qualifications of Teachers:

1. No teacher who has not been graduated from a course affording special training in primary work shall be qualified to teach a primary room in any graded school.
2. Teachers in grades from the second to the sixth, inclusive, shall hold at least second grade certificates.
3. Teachers of the seventh and eighth grades shall hold at least a first grade state certificate.
4. The principal of a graded school is required to hold a professional state certificate, or a diploma from the advanced course of a Minnesota state normal school, or of a reputable college or university, or a diploma of an equal rank from a state normal school outside of Minnesota, which diploma must first be endorsed by the superintendent of public instruction before it is valid.
5. A limited certificate is not valid in any graded school.
6. Before entering into contracts or paying salaries, school boards in districts maintaining state graded schools shall require the principal and teachers to present their certificates for inspection and record to the clerk of the school board.

Teachers' Salaries:

No principal of a graded school shall receive less than seventy-five dollars a month for his services as principal and no teacher less than forty dollars a month.

Removal from List:

Schools failing to comply with the above requirements or neglecting to maintain a satisfactory standard of efficiency may be dropped from the list. It shall be the duty of the inspector to warn the clerk or other officer of the school board of such possible action.

By order of the State High School Board.

J. W. OLSEN, *Secretary*

Department of Public Instruction,
St. Paul, August 20, 1907.

NOTE 41. On April 28, 1909 the following rules were passed by the High School Board concerning graded schools receiving $500 special grant for high school work:

1. A suitable building of not less than six rooms, including a laboratory, shall be provided.

2. Not less than six teachers shall be employed during the entire year for which aid is granted.

3. The principal shall be provided with ample recitation room and office, and shall have reasonable time in school hours for general supervision.

4. The assistant principal shall be in charge of the high school department, including grammar school students seated in the room.

5. The assistant principal must hold a state professional certificate, or a diploma from the advanced course of a state normal school or of a reputable college or university.

6. The salary of the principal shall not be less than ninety dollars a month.

7. Not less than twenty pupils shall be enrolled in the high school department.

8. Not less than two years of high school work of such character that it will admit students to the third year of any state high school shall be maintained.

In the report of the state inspector of graded schools for 1910 equipment is described more in detail.

1. That for work in geography each school be supplied with a globe, preferably one suspended from the ceiling and not less than eighteen inches in diameter, and the following maps: the world on Mercator's Projection, the Eastern and Western Hemispheres, the United States, North America, South America, Europe, Asia, Africa, Australia, Minnesota. The three first named ought to be a larger size than the remaining seven.

2. That for work in United States history each school be provided with a large outline map of the United States painted on slated cloth. With the aid of colored crayons very effective use can be made of this map.

3. That the supplementary reading be made up wholly of books not arranged in series for grades.

4. That one International dictionary, or its equivalent, be considered sufficient for a school of six departments or less.

5. That pupils be encouraged to purchase their own small dictionaries after they have been admitted to the fourth grade, and that, in places where it is considered inadvisable to make this requirement, the school board furnish one dictionary for every four pupils above the third grade.

NOTE 42. On January 22, 1910 the Board passed a ruling that graded schools with high school departments should pay their principal not less than $900 annually.

NOTE 43. On August 10, 1911 the number of students required in high school departments of graded schools was changed from twenty to fifteen.

III. Rural Schools

NOTE 44. The writer has been unable to secure or find reprints of the rules of the Department of Public Instruction governing state aid to rural schools previous to 1909.

A pamphlet entitled "Special Aid to Semi-graded and Rural schools—Department of Public Instruction, Minnesota, May 20, 1909," is reproduced here in toto.

SPECIAL STATE AID
TO
SEMI-GRADED AND RURAL SCHOOLS

RULES GOVERNING SEMI-GRADED AND FIRST- AND SECOND-CLASS RURAL SCHOOLS
APPLYING FOR STATE AID
In effect August 1, 1909

Semi-graded Schools

To be entitled to special state aid of $300 as a semi-graded school, the law and regulations of this department require:

1. School must have maintained, in each of the two departments, for the full period of eight months during the year.

2. The principal must hold a first grade common school certificate, its equivalent, or one of higher rank, during the entire school year. The other teachers must hold at least second grade common school certificates. Limited certificates, and county third grade certificates are not sufficient.

Unless school officers are themselves thoroughly familiar with the rules relating to certificates, they should confer with their county superintendent.

3. The school building and each room must be clean and well kept. PROPER PROVISION MUST BE MADE FOR HEATING AND VENTILATING in accordance with instructions in closing portion of this pamphlet.

4. The district must have a suitable school building, outhouses, library, and apparatus necessary for doing efficient work.

5. The school must be provided with sufficient blackboard, slate preferred, and a Webster's International, an Unabridged Standard, or a Century Dictionary. It must have at least one complete set of supplementary readers for each grade or class in addition to the regular readers used, and a well selected library, to which there must yearly be made additions to the amount of at least $15.

If the district purchases $15 worth of library books under the library law, the state will meet half the expense. The books must be ordered early in the school year and not later than January 1st, so that the pupils may have the benefit of them during most of the school year.

6. The application of each school must show that it has maintained its standard of efficiency in both work and equipment, and that some improvement has been made during the year. The school grounds must be kept neat and clean, and present an orderly and attractive appearance. Each building should have two outhouses properly built and cared for, some distance apart. Where conditions seem to demand it, these may be built together, provided they are separated by a strong wall, impervious to sound, and the approaches are separated by a tight board fence at least eight feet high. Outhouse conditions not complying with these rules must be cured AT ONCE.

7. The school must have an aggregate attendance of at least 3,200 days.

Rural Schools, First and Second Class

Schools employing first grade teacher and applying for the $150 state aid will be known as FIRST CLASS rural schools; those employing a second grade teacher and applying for the $100 aid will be known as SECOND CLASS rural schools.

To be entitled to special state aid as a rural school of the first or second class the law and the regulations of this department require that:

8. School must have been maintained for the full period of eight months during the year.

9. The teacher in a school of the FIRST CLASS must have held a first grade common school certificate, its equivalent, or one of higher rank, from the beginning of and through the school year. In one of the SECOND CLASS the teacher must in like manner, have held a second grade common school certificate. A limited certificate does not meet the requirements of law.

Unless school officers are thoroughly familiar with the rules relating to certificates, they should confer with their county superintendent.

10. For both classes of rural schools the district must have a suitable building, outhouses, a library, and apparatus necessary for doing efficient work.

For rural schools of the first and the second class this department makes the same requirement it makes of semi-graded, the school building and its equipment, heating, ventilating, blackboards, sets of supplementary readers and dictionaries. Books to the amount of $10 must be added to the library yearly. The rule regarding outhouses will be strictly enforced, and is the same as for semi-graded schools.

AID WILL NOT BE GRANTED TO EITHER CLASS OF RURAL SCHOOLS IN WHICH THE AGGREGATE ATTENDANCE IS LESS THAN 1,600 DAYS.

Teachers' Certificates

11. It will be observed that the certificates required of the teacher in each state-aided school is a STATE certificate of either the first or the second grade. A limited certificate or a county third grade certificate will not be sufficient for any teacher in any department of a semi-graded, or in a first or second class rural school receiving special state aid.

Application and Award

12. Under the provisions of Chapter 142, Laws of 1905, this special aid will be paid to the various school districts by the County Treasurer, after October 1st in the same manner as other school funds.

County Superintendents are required by law to make recommendation of districts for this aid. The department must rely very largely upon the intelligence, discrimination and judgment of the superintendents. AN APPLICATION SHOULD NOT BE FORWARDED, OR DISTRICT RECOMMENDED UNLESS THE SUPERINTENDENT IS FULLY SATISFIED THAT THE DISTRICT HAS COMPLIED WITH BOTH THE SPIRIT AND THE LETTER OF THE LAW, AND WITH THE REQUIREMENTS OF THIS DEPARTMENT.

The State Superintendent apportions the aid awarded to each school that has fully complied with the law; but if the amount available under this act be not sufficient to apportion the full amount to each school entitled to receive aid, it will be divided PRO RATA.

The County Superintendent will please observe that we prefer to have all the applications from his county at one time, and that they must reach this office before August 15th.

Heating and Ventilating of One- and Two-Room Schoolhouses As Required for Special State Aid.

Supplementary to Bulletin No. 15, this information is intended to make clear the attitude of the state department on various questions that have been raised by county superintendents and school officers relative to the heating and ventilating of school buildings. It aims to state the essential requirements as definitely and as briefly as possible.

Stove Heating with Home-made Ventilating System

13. The chimney shall be at least 20x20 inches clear on the inside, throughout its entire length. This is the standard size for a room in which the average attendance does not exceed 30. It should be set into the side of the building so that only one side of it is exposed, and should extend at least 25 feet above the level of the floor, and at least 4 feet above the highest portion of the roof.

Inside the chimney shall be a stack, 8 inches in diameter, made of No. 16-gauge steel. This stack shall rest on the floor of the chimney for support, shall be held in place by side braces, and shall extend two feet above the chimney top. The smoke shall enter the stack at the usual smoke-pipe height. Proper provision for removal of the soot is to be made in the lower part of the stack.

Ventilation

14. The foul air shall be drawn into the chimney through a register at the floor. Two registers are preferable. The lower edge of each shall be level with the floor, and the top not more than 14 inches above it. The total area of the registers used is to be one quarter greater than that of the chimney flue.

Stove

15. The stove shall be surrounded by a shield or casing standing at least 6 inches away from it and not less than 12 inches above the floor.

Shield

16. This is to be built of Russian iron, or polished or plated steel, with a lining of asbestos, and an inside lining of corrugated tin, to make it as nearly as possible radiation-proof.

Fresh Air

17. The fresh-air intake shall have an area as great at least as that of the foul-air flue, exclusive of the smoke stack. It must not diminish in size toward the inside.

It must so enter the space between shield and stove as to insure that the fresh air will be thoroughly warmed before it finds its way into the room.

It has been proved that a fresh-air register under the stove does not do the work intended, and this would not, therefore, be accepted as meeting the requirements. Such registers tend to spread cold air over the floor before it is heated. (See Bulletin No. 15, pages 9 and 10.)

Furnace Heating and Ventilating of a One-Room Schoolhouse

18. The requirements in this case as to chimney, smokestack, and fresh-air intake are the same as those laid down regarding a home-made ventilating system.

Where more rooms than one are to be heated, there must be a corresponding increase in the measurements indicated for ventilation purposes. The heat should be carried from furnace to schoolroom, either by means of a galvanized duct leading up through a partition wall, if possible, or through a separate flue in the chimney. The heat should enter the room about 7 feet from the floor—in no case through registers in the floor. (See Bulletin No. 15, Pages 10 and 11.)

Patent System Heating and Ventilating of a One-Room Schoolhouse

19. The chimney shall be not less than 12x16 inches clear on the inside throughout its entire length, and unobstructed in any part of it.

The foul-air ventilator leading into the chimney shall be at least the equivalent of 12 inches in diameter.

The fresh-air intake shall be as large, at least, as the foul-air ventilator, and preferably larger. The stove shield and the fresh-air devices must meet the requirements set forth for a home-made system in these particulars.

Explanatory Statement

20. Heating and ventilating systems that entail the use of a double-flue chimney, one compartment of which acts as a foul-air ventilator, have proved inadequate and unsatisfactory, and will not be accepted after the present school year, except as explained in Rule 21 of this pamphlet.

A shield that rests on the floor, and a fresh-air register that opens under the stove, have also proved inadequate and unsatisfactory, and will in no case hereafter be accepted.

Systems that have foul-air ventilators unheated or smaller than the requirements demand will not be accepted.

21. A building having a heating and ventilating system installed in accordance with the provisions of Bulletin No. 3, issued by this department in 1904 (with chimney not less than 16x24 inches clear on the inside, or the equivalent of it) will not be required to change the plans or system for a continuance of the aid so long as the system and the chimney are in good usable and working order.

Previous to the issuance of Bulletin No. 15 in May 1908, the department accepted, as meeting the state aid requirements, a patented system with a fresh-air intake and foul-air ventilator the equivalent of 10 inches in diameter; and districts which had such a system installed before that time will not be debarred by it from still receiving aid while the chimney and the system continue in good working order.

It is not the purpose to require frequent or unnecessary changes in heating and ventilating systems. The department will recognize any practical and workable system heretofore in use, which complied with the requirements as they existed at the time it was installed.

General Suggestions

22. Means of Heating. Stoves of the round-oak type with firepots 20 to 24 inches in diameter—according to the size of the room—are well suited for ventilation purposes. Box stoves are unsightly and unsatisfactory; their use should be

abandoned as soon as possible. Base-burners are not adapted for ventilation systems, and should not be used.

Placing of Chimney. Whenever practicable, the chimney should be in the same end of the building as the entrance. This makes it possible to have the heater near the door, convenient for the bringing in of fuel and the carrying out of ashes, and also serves as a means of checking cold drafts occasioned by the opening of the door.

Cost. School boards should bear in mind that the installation of a proper system of heating and ventilation is a permanent improvement, as well as a fundamental requisite for a successful school. It is usually economy in the end to pay a little more for something that is right than to try to get along with makeshifts. Before putting in a new and untried system of heating and ventilating, or making any changes in a system already installed, school boards are urgently advised to confer with their county superintendent.

C. G. SCHULZ,
Superintendent of Public Instruction

NOTE 45. Copies of further regulations have not been found up to a circular letter issued by the State Superintendent, dated November 8, 1912. The stipulations governing state aid in this circular are:

"Your attention is directed to one additional requirement for the receiving of state aid in semi-graded and in rural schools of Classes A, B, and C.

'(h) Primary Material. Ample material for seat work in primary grades must be provided—at least $10 for each school.'

It is desirable that this rule should effect the provision of this material in the schools during the present school year. Beginning with the school year 1913-14, the rule will be uniformly enforced."

IV. Industrial Departments

NOTE 46. A. Each school must be listed by the State High School Board before it begins work.

B. The equipment shall include at least:

1. One shop.
2. One room for domestic science exclusively.
3. One class room.
4. One laboratory.
5. Farm buildings sufficient to shelter seeds, tools, and children in case the plot is removed from the school building.

C. Instructors required:

1. The corps shall include not less than three special instructors, one having had training in agriculture, one in shop work, and one in domestic science.
2. In case of a rural consolidated school one of these instructors may be the principal.
3. In addition to a legal certificate, each special instructor shall hold a diploma from a reputable school of agriculture, a technical school, or a permit from the secretary of the High School Board.

D. In reckoning aid, credit shall be given for:

1. Salaries of special instructors—in case part time is devoted to the work corresponding credit shall be given.
2. Equipment, including tools and apparatus.
3. Supplies, including seeds.
4. Labor and team work.

5. Reference books.
6. Extension work in rural schools.

E. No part of the fund may be expended in purchasing ground or in erecting buildings. (Minutes of the State High School Board, April 28, 1909).

On May 4, 1909 the following rules were added:

1. That the farm building shall contain a suitable office room for the person in charge of the agricultural work and a suitable recitation room.
2. That the inspectors and the State Superintendent be directed to prepare suitable courses of study for the work in schools designated under the Putnam act.

NOTE 47. The regulations of the State High School Board for schools maintaining special departments authorized by the law of 1911 are set forth in Circular No. 3, 1911, of the Department of Public Education.

REGULATIONS
OF THE
STATE HIGH SCHOOL BOARD

FOR SCHOOLS MAINTAINING A DEPARTMENT OF AGRICULTURE AND A DEPARTMENT OF HOME ECONOMICS OR MANUAL TRAINING
IN ACCORDANCE WITH CHAPTER 91, LAWS OF 1911

CIRCULAR NO. 3, 1911

(Chapter 91, Laws of 1911)

SECTION 1. Any High School or Graded School which shall maintain such a course as the High School Board of this State shall prescribe in Agriculture and either in Home Economics or in Manual Training, shall receive annually in addition to other aid the sum of One Thousand ($1,000) Dollars for maintaining such industrial courses, to be paid from the appropriations made for State aid to High and Graded Schools.

SEC. 2. This aid shall not be paid to any school receiving aid under any other act, for the maintenance of industrial courses.

The following rules apply to high and graded schools alike:

1. Applications for the aid ($1,000) are made before the first day of August to the Superintendent of Public Instruction on the blank form prepared for the purpose.

2. The consent of the High School Board shall be obtained before the departments are established and the work is undertaken.

3. The annual award—which is made at the regular August meeting of the board—will be based on satisfactory work in agriculture and home economics, or in agriculture and manual training, during the preceding school year.

4. The industrial courses authorized by this law and covered by these rules shall be maintained throughout the school year, and shall be free of tuition to all applicants, except that the tuition of non-resident pupils is chargeable against the school district to which such pupils belong.

5. In addition to the longer course, each school shall offer a free winter short course of not less than three months.

6. Instructors. Each instructor in agriculture, sewing, cooking, or manual training shall have had adequate training in a technical school. The instructor in agriculture shall be a graduate of an agricultural college, or shall have had technical training equivalent to that of a graduate of such institution. Each of these instructors shall, before a contract is made, secure from the Superintendent of Public Instruction a special industrial certificate, issued only on the recommendation of

persons in a position to know the qualifications of the candidate, and upon the endorsement of the state inspector.

The superintendent or the principal of a school having not to exceed five grade teachers may teach one industrial subject. In such case he must have the qualifications and hold the certificate required for an industrial teacher.

The instructor in agriculture may direct manual training. The work in home economics may be divided between two instructors, one for sewing and the other for cooking. A regular high school or grade teacher may devote part time to sewing or to cooking, provided she possess the qualifications and hold the certificate necessary for an industrial teacher.

7. Courses. Home economics shall be held to include both cooking and sewing. A room is here defined as one having not less than 700 square feet of floor space, and properly lighted and ventilated.

Sewing. An adequate outfit shall be provided, including cutting tables, one or more sewing machines, material suitable for patterns, the materials required for exercises, and such implements as are required in the usual sewing room.

Cooking. A special room shall be fitted up with tables, cooking utensils, table service, cupboards, and conveniences for storing kitchen supplies.

Manual training. A special room shall be provided with benches and the necessary tools. Material for exercises shall be supplied free of charge. Lumber for articles taken home may be charged for at cost.

Agriculture. The instructor shall have a room exclusively for his work. He shall be provided with laboratory facilities, and shall have not less than a continuous half day for agriculture work. He shall make a close study of local conditions, and attend markets, horticultural meetings, meetings of creamery and stock-breeding and other associations, and such other gatherings as afford opportunity to make the acquaintance of farmers.

The work in agriculture shall include:

a. A course based on textbooks, bulletins, and lectures.
b. A laboratory course, including physical examination of soils, preparation of weed-seed cases, testing of seeds, testing for butter-fat, grain judging, stock judging, etc.
c. Special work along some line of local interest, such as dairying, corn breeding, small grain, potatoes, fruit, meat products, poultry, etc. The school shall not only maintain a standard of general efficiency, but shall develop strength in a chosen specialty.
d. The organization of institute work in coöperation with the extension division of the college of agriculture of the state university.
e. A winter short course.

If the work be done satisfactorily, two periods given daily to an industrial subject or subjects shall count as a credit.

May 1, 1911.

C. G. SCHULZ,
State Superintendent and Secretary of the High School Board.

CIRCULAR No. 7, 1912

Superintendents, Principals, and School Boards:

Your attention is directed to the questions referred to in this circular that relate to Industrial departments in high schools and graded schools.

At its annual meeting on August 1st, the High School Board adopted these regulations:

Regulations of the High School Board Relating to Industrial Training Departments

School Plot

The board of each high and graded school which receives the special award for agricultural work, and which maintains a school farm, must keep its plot or field free of weeds, and in a state proper for cultivation and for demonstration purposes. Compliance with this rule will be taken into consideration by the High School Board in making the award.

Employment of Agricultural Director

High and Graded schools which receive the special award for agricultural work and instruction are required, beginning with the present school year, to employ the agricultural director for the full calendar year of twelve months, that he may render efficient and useful service in this special line to his school and community. The year of employment will begin August 1st.

Tuition

High and Graded schools receiving the special award for industrial work, which charge tuition for the enrollment of non-resident pupils in the industrial department, are required to make monthly statements to the home district, of the number of pupils enrolled, the number of days' attendance, and the amount of tuition charged against the district for the month.

It is a matter of importance for the schools which maintain an industrial department, and which collect tuition from the rural schools tributary to them, on account of enrollment of non-resident students, that no misunderstanding or ill-will should grow from these relations. The High School Board asks that the school board and superintendent in each central school handle this situation in a systematic and businesslike way. To this end, it requests them to give notice to the clerks of the rural schools upon the enrollment of each new student from the respective districts and to send monthly statements of the tuition charged. To facilitate this work, sample blanks have been prepared and are here sent you, so that each school may provide itself with a supply of them.

Department of Industrial Education

To provide for the training of teachers of agriculture, the High School Board, in conjunction with the Board of Regents of the University, has employed Mr. A. V. Storm, formerly of the State College at Ames, Iowa, to take charge of a department in the College of Agriculture to be known as the Department of Agricultural Education. The work of Mr. Storm begins with the opening of the present school year. He will spend at least half of his time during the year visiting schools in which agricultural departments are maintained that receive state aid. His visits to the schools will be to study agricultural education in Minnesota, with a view to training teachers for this service.

High School Board Examinations—Dates for 1913

January 20 and 21—in certain half-year High School subjects.

January 24 and 25—in Grammar grade subjects.

May 26 to 29 inclusive—in both Grammar grade and High School subjects.

August 20, 1912.

C. G. Schulz,
Superintendent.

APPENDIX B

Herewith are presented three of the five tables as published in the final brief report of the Commission.[1] The fifth table has already been included in the chapter on Rural Schools. The following matter is reproduced without change from pages 28-31, inclusive, of the report.

Enrollment in:

High school districts.....196,752—43.8 per cent
Graded school districts..... 34,223— 7.8 per cent
Rural school districts.....218,007—48.4 per cent

Attendance:

Total days attendance in high school districts.....30,571,941—53 per cent
Total days attendance in graded school districts..... 5,131,076— 8.9 per cent
Total days attendance in rural school districts.....21,865,741—38.1 per cent

TABLE I

Relation of Valuation and Taxation to Cost of Instruction

County	Assessed Valuation per Pupil Enrolled		Average Special Tax Rate in Mills			Average Expense in Cents per Day of Attendance		
	Rural	High and Graded	Rural	High	Graded	Rural	High	Graded
1. Carlton	$1,067	$ 1,677	16.	12.2	39.2	23.5	22.8	28.1
2. Hubbard	1,577	816	16.03	21.	.....	25.25	18.7	.....
3. Kittson	3,099	1,134	6.04	25.	12.2	30.42	26.5	26.1
4. Norman	2,217	1,127	5.34	28.	16.7	20.5	26.9	24.4
5. St. Louis	4,369	10,585	16.5	11.5	28.1	40.	81.8	52.1
6. Douglas	1,663	1,249	6.	19.1	12.2	17.7	27.8	17.7
7. Isanti	1,133	859	7.5	27.7	25.6	15.2	21.6	30.
8. Meeker	2,426	1,229	5.27	19.9	13.6	19.08	25.9	24.8
9. Scott	2,427	1,483	4.13	18.8	.....	21.33	29.8	37.6
10. Wilkin	3,489	1,112	7.	33.8	25.9	31.6	29.3	.....
11. Dodge	2,666	1,073	5.44	21.9	15.3	22.5	27.76	17.8
12. Fillmore	2,728	996	5.6	26.8	19.7	24.08	25.3	20.9
13. Pipestone	3,294	1,163	5.62	23.	23.5	26.3	27.1	28.2
14. Watonwan	3,317	1,212	3.53	19.	17.	20.33	21.6	18.6

[1] See Chapter 1, p. 1.

TABLE II

RELATION OF STATE SUPPORT TO TOTAL COST OF MAINTENANCE
(State support is the sum of annual aid and apportionment)

COUNTY	STATE SUPPORT EACH DAY PER PUPIL			ANNUAL COST PER PUPIL ENTITLED TO STATE APPORTIONMENT			PER CENT OF STATE SUPPORT AS RELATED TO TOTAL COST		
	RURAL	HIGH	GRADED	RURAL	HIGH	GRADED	RURAL	HIGH	GRADED
	CENTS	CENTS	CENTS				PER CENT	PER CENT	PER CENT
1. Carlton	7.8	5.2	10.8	$28.40	$ 37.60	$42.40	35.72	23.3	35.7
2. Hubbard	6.6	8.1	.....	30.90	27.70	.....	32.99	42.1	.....
3. Kittson	8.1	8.9	15.2	36.15	37.80	36.50	29.41	33.8	54.3
4. Norman	7.8	8.3	8.6	22.50	40.60	34.20	38.64	32.	36.6
5. St. Louis	7.5	4.6	6.2	51.60	139.00	86.40	16.49	6.3	10.7
6. Douglas	8.2	7.1	7.	19.00	38.30	28.00	48.84	33.4	39.9
7. Isanti	7.5	6.9	7.5	18.19	33.70	43.40	44.99	32.2	25.2
8. Meeker	8.	10.4	7.6	21.30	40.60	36.60	40.99	39.7	30.7
9. Scott	8.1	12.2	.....	19.70	50.60	.....	42.28	39.8	.....
10. Wilkin	8.1	8.5	11.	36.30	44.40	57.10	27.24	28.6	30.5
11. Dodge	8.3	12.4	6.3	27.50	46.70	29.00	39.29	45.	30.5
12. Fillmore	8.2	8.4	7.1	27.90	43.00	34.90	35.63	33.5	34.1
13. Pipestone	8.3	7.2	8.3	32.60	43.00	42.00	34.00	26.4	33.8
14. Watonwan	8.1	7.2	6.1	21.30	39.00	30.60	39.24	30.25	33.

NOTE: One fifth of the rural schools in these counties actually received more from the state than they raised by local taxation.

TABLE III

ATTENDANCE AND SALARIES

COUNTY	AVERAGE DAYS OF ATTENDANCE			AVERAGE MONTHLY SALARY OF TEACHERS
	RURAL	HIGH	GRADED	RURAL
1. Carlton	110.5	160	137	$50.15
2. Hubbard	90.3	139	.....	45.66
3. Kittson	90.66	140	127	51.14
4. Norman	88.6	146.5	130	49.70
5. St. Louis	117.6	153	144	64.50
6. Douglas	105.75	130	141	51.00
7. Isanti	100.9	143	131	54.90
8. Meeker	95.25	139	144	52.30
9. Scott	89.8	140	.....	49.65
10. Wilkin	92.13	140	129	52.92
11. Dodge	101.2	143	148	50.76
12. Fillmore	94.94	148	140	45.84
13. Pipestone	101.5	146	121	52.80
14. Watonwan	89.8	143	145	48.73

TEACHER'S SALARIES FOR ENTIRE STATE

	MAXIMUM	MINIMUM
High school districts	$2,000	$540
Graded school districts	1,450	389
Rural school districts	800	210

APPENDIX C

LAWS PASSED BY THE LEGISLATURE OF 1915

LAWS OF 1915 MINNESOTA

CHAPTER 238

CONSOLIDATION OF SCHOOL DISTRICTS

SEC. 1. Two or more school districts of any kind may consolidate either by the formation of a new district or by the annexation of one or more districts or unorganized territory to an existing district in which is maintained a state graded, semi-graded, or high school as hereinafter provided.

A district so formed by consolidation or annexation shall be known as a consolidated school district. Before any steps are taken to organize a consolidated school district, the superintendent of the county in which the major portion of territory is situated, from which it is proposed to form a consolidated school district, shall cause a plat to be made showing the size and boundaries of the new district, the location of school houses in the several districts, the location of other adjoining school districts and of school houses therein, and the assessed valuation of property in the proposed district, together with such information as may be of essential value, and submit the same to the superintendent of education who shall approve, modify, or reject the plan so proposed, and certify his conclusions to the county superintendent of schools.

SEC. 2. To receive state aid as a consolidated school of Class A or Class B, as defined in this act, the consolidated districts must contain not less than twelve sections; provided, however, that when any consolidated school district shall have attained a valuation of $200,000 and not exceeding $1,000,000, and contains within its borders an incorporated village which consolidated district contains but ten sections, such consolidated district shall have all the rights and privileges of a consolidated school district. Any existing school district having the area and meeting the requirements specified in this act, shall have the rights and privileges of a consolidated school district.

SEC. 3. After approval by the superintendent of education of the plan for the formation of a consolidated school district, and upon presentation to the county superintendent of a petition signed and acknowledged by at least twenty-five (25) per cent of the resident freeholders of each school district or area affected, qualified to vote at school meetings, asking for the formation of a consolidated school district in accordance with the plans approved by the superintendent of education, the county superintendent shall, within ten days, cause ten days' posted notice to be given in each district affected, and one week's published notice, if there be a newspaper published in such district, of an election or special meeting to be held within the proposed district, at a time and place specified in such notice, to vote upon the question of consolidation.

SEC. 4. At such meeting the electors shall elect from their number a chairman and clerk who shall be the officers of the meeting. The chairman shall appoint two tellers, and the meeting and election shall be conducted as are annual meetings in common and independent districts. The vote at such election or meeting shall be by ballot, which shall read: "For Consolidation," or "Against Consolidation." The officers at such meeting or election shall, within ten days thereafter certify the result of the vote to the superintendent of the county in which such district mainly lies. If a majority of the votes cast be for consolidation, the county superintendent within

ten days thereafter shall make proper orders to give effect to such vote, and shall thereafter transmit a copy thereof to the auditor of each county in which any part of any district affected lies, and to the clerk of each district affected, and also to the superintendent of education. If the order be for the formation of a new district, it shall specify the number of such district. The county superintendent shall also cause ten days' posted notice, and one week's published notice, if there be a newspaper published in such district, to be given of a meeting to elect officers of the newly formed consolidated school district; provided, that the board of a consolidated school district shall form, and after the formation of the consolidated district, have all the powers, privileges, and duties now conferred by law upon boards of independent districts. After the formation of any consolidated school district, appeal may be taken as now provided by law in connection with the formation of other school districts. Nothing in this act shall be construed to transfer the liability of existing indebtedness from the district or territory against which it was originally incurred.

SEC. 5. In like manner, one or more school districts may be consolidated with an existing district in which is maintained a state high or graded, or semi-graded school in a district containing an incorporated village, in which case the school board of the district maintaining a state high or graded, or semi-graded school in a district containing an incorporated village, shall continue to be the board governing the consolidated school district, until the next annual school election, when successors to the members whose terms then expire shall be elected by the legally qualified voters of the consolidated school district; provided, however, that in the case of consolidation with a school district in which there is maintained a state high or graded, or a semi-graded school in a district containing an incorporated village, consolidation shall be effected by vote of the rural school districts only in the manner provided under this act, and by the approval of such consolidation of the rural district or districts with the one in which there is maintained a state high or graded or semi-graded school in a district containing an incorporated village, by the school board thereof.

SEC. 6. In like manner any portion of an unorganized school district or district governed by a county board of education may be consolidated with an existing district in which is maintained a state high, graded, or semi-graded school, by a vote of the county board of education in the county in which is located such unorganized territory and by the approval of such consolidation of the unorganized territory and by the school board of the district in which is maintained a state graded, semi-graded, or high school.

SEC. 7. The officers of the several districts forming a consolidated school district shall within ten days from receipt of copy of the order of the county superintendent certifying the formation of the new district, or immediately after election and qualification of members of the school board in the consolidated school district, turn over to the proper officers of the newly elected school board, or to the proper officers of the school board in the district maintaining the state high or graded or semi-graded school, all records, funds, credits, buildings, property, and other effects of their several districts.

SEC. 8. For the purpose of promoting a better condition in rural schools, and to encourage industrial training, including the elements of agriculture, manual training, and home economics, the board in a consolidated school district is authorized to establish schools of two or more departments, provide for the transportation of pupils, or expend a reasonable amount for room and board of pupils whose attendance at school can more economically and conveniently be provided for by such means; locate and acquire sites of not less than two acres, and erect necessary and

suitable buildings thereon, including a suitable dwelling for teachers, when money therefor has been voted by the district. They shall submit to the superintendent of education a plat of the school grounds, indicating the site of the proposed buildings, plans and specifications for the school building and its equipment and the equipment of the premises.

SEC. 9. (1) For receiving state aid, schools in consolidated districts shall be classified as A and B. Schools of Class A shall be in session at least eight months in the year and be well organized. They shall have suitable school houses with the necessary rooms and equipment. Those belonging to Class A shall have at least four departments and those belonging to Class B, at least two departments. The board in a consolidated school district maintaining a school of either class shall arrange for the attendance of all pupils living two miles or more from the school, through suitable provision for transportation or for the boarding and rooming of such pupils as may be more economically and conveniently provided for by such means.

(2) Besides maintaining schools in consolidated districts conforming to the requirements of those coming under classes A and B, the school board may maintain other schools of not more than two departments, and receive state aid for these as provided for semi-graded and rural schools.

SEC. 10. (1) The principal of a consolidated school shall be qualified to teach the elements of agriculture, as determined by such tests as are required by the superintendent of education. A school of this class shall have suitable rooms and equipment for industrial and other work, a library, and necessary apparatus and equipment for efficient work, and a course of study embracing such branches as may be prescribed by the superintendent of education.

(2) The principal and other teachers, including special teachers, shall have such qualifications as may be fixed by the superintendent of education.

SEC. 11. Schools under Class A in consolidated districts shall receive annually aid of five hundred dollars ($500); those under Class B shall receive annually aid of two hundred and fifty dollars ($250).

In addition to such annual aid, schools shall receive annually the amount reasonably expended for the transportation of pupils, not to exceed two thousand dollars ($2,000).

In addition to other annual aid, consolidated schools of either of the above classes shall receive an amount to aid in the construction of buildings, equal to twenty-five (25) per cent of the cost of such buildings, but no school shall receive more than a total of two thousand dollars ($2,000) for aid in construction of buildings. The annual aid and the aid for buildings shall be paid in the same manner as now provided by law for the payment of other state aid to public schools.

Whenever any school in a consolidated district attains the rank of a state high or graded school, it shall possess the rights and privileges of such school.

SEC. 12. Sections 1289, 1290, 1291, 1292 and 1293, Revised Laws of 1905, and chapter 326, Session Laws of 1905, and chapter 304, Session Laws of 1907, chapter 207, Session Laws of 1911, and chapters 279 and 428, Session Laws of 1913, and other acts and parts of acts inconsistent herewith, are hereby repealed.

CHAPTER 239

RELATING TO INDUSTRIAL DEPARTMENTS, ASSOCIATION WITH CENTRAL SCHOOL AND STATE AID FOR THESE

SEC. 1. Definitions,—"Industrial Subjects" as that term is used in this act, shall include courses in agriculture, home training (including cooking and sewing), manual training, and commercial training.

The term "central school" as used in this act, shall mean the school or schools of a district in which industrial courses are given.

SEC. 2. Schools Designated to Maintain Industrial Courses,—Any high school, graded school, or consolidated rural school which has satisfactorily met the requirements in regard to rooms and equipment, and has shown itself fitted by location and otherwise to give training in any one or more of the industrial subjects, may be designated by the state board of education to maintain such industrial courses, and to receive state aid therefor.

Any school now operating and receiving state aid under the provisions of chapter 247, General Laws of 1909, and the acts amendatory thereof, shall continue to be aided under the provisions of this act for its industrial departments, provided such school maintains the standards made for receiving aid on such account.

Any such school which has secured a tract of land for experimental and demonstration purposes may continue to own and operate such tract in connection with the industrial school courses.

SEC. 3. Qualifications of Instructors in Industrial Departments,—Each such school shall employ trained instructors for the several courses having such qualifications as may be fixed by the state board of education.

SEC. 4. School Garden and Experimental Tract,—A school maintaining a course in agriculture may procure a tract of land suitable for school garden and for purposes of demonstration located within the school district, or if outside of the school district not to exceed three miles from the central building.

The board may require a school having a course in agriculture to procure a tract of land for the purposes stated.

SEC. 5. Instruction Shall Be Practical; Short Course,—The instruction in agriculture, as well as in the other industrial courses, shall be of a practical character and shall include such questions and the study of such subjects or courses as have a direct relation to the business of farming, home making, and the other subjects included under the head of industrial studies.

When necessary to accommodate a reasonable number of boys and girls to attend only in the winter months, special classes shall be formed for them.

SEC. 6. Association,—For the purpose of providing training and instruction in agriculture and such other industrial subjects as can properly be taught to pupils in rural schools, and to extend the influence and supervision of the central school to rural schools, one or more school districts may become associated with a high, graded, or consolidated rural school in which industrial courses are maintained.

Such association may be effected with a central school even though such central school has not been designated to receive annual state aid on account of maintaining industrial courses.

SEC. 7. Procedure for Association,—Association shall be effected upon action taken at any annual or special meeting of the rural school district seeking such association, under such rules as the state board of education may establish.

The association shall be considered as effected only after the approval by the school board of the central district and by the state board of education.

SEC. 8. Duties of Superintendent or Principal of Associated Rural Schools,—The superintendent or principal of the central school shall exercise the same authority and supervision over the associated rural schools as over the central school. He shall prepare for the associated rural schools suitable courses of study in agriculture and in such other industrial courses as may properly be taught in the associated rural schools.

SEC. 9. Any pupil from an associated rural school shall be admitted to any grade or department in the central school upon the same conditions as pupils resident in the district of the central school.

SEC. 10. Termination of Association,—The relationship between any associated school district and the central school shall be permanent except as it may be terminated by a majority vote of the voters of the associated district.

SEC. 11. Associated School Board,—The members of the various school boards of the associated rural districts and the members of the school board of the central district shall constitute a board to be known as "The Associated School Board of ———— of ————."

SEC. 12. Duties of Associated School Board,—The duties of the associated board shall be:

(a) To hold such meetings at the central school at such times as the associated board may determine.

(b) To act on questions affecting the relation of the associated rural schools and the central school.

(c) To submit to a vote of the various associated rural districts the question of levying a tax in the associated rural districts to assist in the erection of an agricultural and industrial building in connection with the central school, and the levy and collection of a tax for this purpose.

The associated school board may also submit to the several associated rural districts the question of levying a tax in such district to assist the central districts in the maintenance of the industrial courses, such tax in no case to exceed two (2) mills in any year.

Before any tax, either for building or for maintenance, shall be levied, it must be voted for and approved by each of the rural districts so associating with a central school.

(d) To procure for demonstration and experimental work in agriculture, when necessary, a tract of land in one or more of the associated rural districts.

SEC. 13. Officers of Associated School Board,—The officers of the district of the central school shall be the officers of the associated school board.

SEC. 14. State Aid to Industrial Departments,—High, graded, and consolidated rural schools maintaining courses in agriculture, home training (including cooking and sewing), manual training, and commercial training, shall receive one thousand dollars ($1,000) for the agricultural course, and six hundred dollars ($600) for each course in home training (including cooking and sewing), manual training, and commercial training.

Aid to each of these departments shall not exceed the sums paid as salaries in the respective departments.

SEC. 15. State Aid to Schools on Account of Association,—Rural school districts associated with a central school shall receive annually fifty dollars ($50) on account of such association.

The central school with which a rural school or rural school district is associated for the purposes herein stated shall maintain departments in agriculture and such other industrial subjects as the state board of education may require, and shall receive annually two hundred dollars ($200) for each such associated rural school or school district.

SEC. 16. In case the state board of education referred to in this act shall not be provided by law, the authority herein granted to such board shall rest in the state high school board and the state superintendent of education in accordance with the provisions of existing law.

SEC. 17. Repealing Clause,—Chapter 247, General Laws, 1909; chapter 82, General Laws, 1911; chapter 309, General Laws of 1913; and chapter 91, General Laws of 1911, as amended by chapter 96, General Laws, 1913, are hereby repealed.

CHAPTER 296

STATE AID TO PUBLIC SCHOOLS

SEC. 1. For the purpose of aid to public schools there shall be established the following state funds:

(a) The endowment fund, which shall consist of the income on the permanent school fund.

(b) The annual fund, which shall consist of the sums appropriated by the legislature for special aid to public schools or departments in the schools.

(c) The current school fund, which shall consist of the amount derived from the state one-mill tax.

SEC. 2. The state board of education shall distribute the annual funds and any other sums appropriated by the state to schools and libraries, in such manner and upon such conditions as will enable them to perform efficiently the services required by law, and to further the educational interests of the state. To this end the state board shall have power to fix the requirements for receiving and sharing in the state aid.

SEC. 3. The endowment fund shall be distributed semi-annually to school districts whose schools have been in session at least six months, in proportion to the number of scholars of school age who have attended school at least forty (40) days during the preceding year.

The annual funds shall be distributed as follows:

SEC. 4. Rural schools in session at least eight months, shall receive one hundred and fifty dollars ($150) for each teacher holding a first-class certificate. Rural schools in session at least seven months annually shall receive one hundred dollars ($100) for each teacher holding a second-class certificate.

SEC. 5. A graded school in session at least nine months in the year shall receive six hundred dollars ($600) and an additional one hundred dollars ($100) for each grade teacher employed in excess of four, counting the principal as a teacher.

A graded school may receive an additional two hundred and fifty dollars ($250) for each high school teacher.

The total aid to a graded school on this basis shall not exceed thirteen hundred dollars ($1300).

No graded school in the same district with an aided high school shall receive annual aid. This provision shall not apply to districts of ten or more townships.

SEC. 6. A high school in session at least nine months in the year shall receive annually eighteen hundred dollars ($1800).

SEC. 7. High, graded, or consolidated schools, maintaining courses in agriculture, home training (including cooking and sewing), manual training, or commercial training, shall receive one thousand dollars ($1,000) for the agricultural course, and six hundred dollars ($600) for each course in home training (including cooking and sewing), manual training, and commercial training.

Aid to each of these departments shall not exceed the sums paid as salaries in the respective departments.

SEC. 8. High schools maintaining a department for training rural teachers shall receive annually twelve hundred dollars ($1200). A school employing more than one teacher in such department may receive not to exceed two thousand dollars ($2,000).

A school employing more than two teachers in such department and enrolling not less than fifty students may receive not to exceed twenty-eight hundred dollars ($2800).

SEC. 9. Consolidated schools of Class A shall receive annually five hundred dollars ($500).

Consolidated schools of Class B shall receive annually two hundred and fifty dollars ($250).

In addition to this annual aid consolidated schools shall be reimbursed for the amount reasonably expended for transportation of pupils, not to exceed two thousand dollars ($2,000).

Districts providing school buildings for consolidated school purposes may be reimbursed up to one fourth of the cost of such buildings, but not to exceed two thousand dollars ($2,000).

SEC. 10. Each school shall receive in addition to other aid, library aid amounting to ten dollars ($10) for each teacher employed, with a maximum of twenty-five dollars ($25) to a building, provided the district appropriates a like amount for the same purpose.

SEC. 11. Districts whose local tax levy for maintenance of schools exceed twenty mills (20) in any year may receive in addition to other aid, one third of the amount raised in excess of that received from the twenty (20) mill levy with a maximum of twenty-five hundred dollars ($2500) to each high school, eighteen hundred dollars ($1800) to each graded school, and to rural schools, two hundred dollars ($200), for each teacher.

SEC. 12. Rural school districts associated with a central school shall receive annually fifty dollars ($50) on account of such association.

The central school with which a rural school or rural school district is associated for the purposes herein stated shall maintain departments in agriculture and such other industrial subjects as the state board of education may require, and shall receive annually two hundred dollars ($200) for each such associated rural school or school district.

SEC. 13. The current school fund shall be distributed to school districts as follows:

The state auditor shall set aside from the current school fund an amount not to exceed one hundred and fifty thousand dollars ($150,000) each year for the following purposes:

(a) To assist any school district which does not maintain a state high or state graded school in maintaining its public schools, when a levy of fifteen (15) mills in such district does not raise five hundred dollars ($500) for each school in session seven (7) months during the year, the state board of education may expend not to exceed two hundred dollars ($200) for each such school.

(b) To make up for any deficit which may arise in payment of the annual funds to schools, or to special departments in certain schools.

(c) To pay the tuition of non-resident pupils enrolled in the industrial departments of state high, graded, or consolidated rural schools which have been designated by the state board to maintain courses and instruction in agriculture, home training (including cooking and sewing), manual training, and commercial training, and whose residence district does not provide courses and instruction of like kind.

SEC. 14. A high school student whose residence district provides high school courses of instruction shall not be entitled to free admission to the high school of any other district except by permission of the school board of such other district, or in accordance with the rules of the state board of education.

The rate of tuition shall be fixed by the state board of education, but not to exceed two dollars and fifty cents ($2.50) per month for each non-resident pupil, nor more than nine (9) months in any school year.

No non-resident pupil shall be entitled to have any tuition made a charge against the state whose residence district furnishes courses and instruction in the industrial studies. Nor shall pupils from any associated district be counted for payment of tuition in the central school of the same district.

No tuition shall be charged any pupil resident of this state, who is enrolled in the high school department of any state high or graded school, except in the industrial departments above specified.

The state board of education shall make proper rules relating to enrollment, attendance, rates of tuition, payment of the endowment and current funds, on account of such non-resident pupils.

SEC. 15. The balance of the current school fund shall be distributed on the same basis and at the same time as the endowment fund.

SEC. 16. In case the state board of education referred to in this act shall not be provided by law, the authority herein granted to such board shall rest in the state high school board and the state superintendent of education in accordance with the provisions of existing law.

SEC. 17. Repealing Clause,—All acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

APPENDIX D

EXTRACTS FROM THE EIGHTEENTH BIENNIAL REPORT OF THE STATE SUPERINTENDENT OF PUBLIC INSTRUCTION

TABLE I[1]

GROWTH OF PERMANENT SCHOOL FUND SINCE 1862

1862	$ 242,531.00
1865	841,007.00
1870	2,426,240.00
1875	3,191,042.00
1880	4,449,725.00
1885	7,303,166.00
1890	9,241,119.00
1895	11,287,423.00
1900	12,546,529.00
1904	15,987,477.00
1906	17,824,135.00
1908	19,709,383.00
1910	21,002,571.00
1912	22,614,294.00
1914	24,668,248.59

TABLE II[2]

PERMANENT SCHOOL FUND, JULY 31, 1914
ACCUMULATIONS

Sales of lands	$14,284,571.22
Amounts paid on forfeitures, right of way, etc.	167,420.28
Sales of timber	6,727,720.87
Mineral permits and leases	308,300.77
Royalty on iron ore	2,818,665.51
Profits on sales of bonds	361,569.94
Total	$24,668,248.59

TABLE III-A[3]

APPROPRIATIONS FOR PUBLIC SCHOOLS

	1914	1915
Aid for high and graded schools, including aid for industrial and training departments	$706,500	$1,064,500
Aid for consolidated, semi-graded, and rural schools	751,975	898,475
Public school libraries	31,500	31,500
Schools on reservations	10,000	10,000
Training schools, institutions, and examinations	44,000	44,000
Aid for common schools on account of state land	50,000	50,000
Total	$1,593,975	$2,098,475

[1] *Eighteenth Biennial Report of the State Superintendent of Public Instruction*, 11. Tables are numbered in consecutive order as they appear in this appendix, and not as they are numbered in the *Report*.

[2] *Ibid.*

[3] *Ibid.*, 14.

TABLE III-B[4]

Increases in State Aid

Annual aid for high schools increased from	$1,750 to $2,200
Graded schools from	600 to 750
High school training departments from	750 to 1,000
Industrial departments from	1,000 to 1,800

TABLE IV[5]

Apportionment of the Current School Fund from 1864 to 1914

Year	Spring			Fall			Total for Year	
	Number Pupils Sharing	Rate	Amount	Number Pupils Sharing	Rate	Amount	Rate	Amount
1864	64,330	$0.45	$ 29,173.50	64,330	$0.63	$ 40,842.90	$1.08	$ 70,016.45
1865	74,695	.13	9,745.45	74,956	.61	45,728.65	.74	55,474.10
1866	87,244	.23	20,066.12	87,244	.67	58,453.48	.90	78,519.60
1867	102,118	.24	24,508.32	102,118	.66	67,397.88	.90	91,906.20
1868	114,618	.31	35,531.58	114,618	.70	80,262.90	1.01	115,794.48
1869	129,156	.40	51,662.40	129,156	.75	96,867.00	1.15	148,529.40
1870	143,745	.38	54,623.10	143,745	.85	122,183.25	1.23	176,806.35
1871	155,767	.24	37,384.08	155,767	.81	126,171.27	1.05	163,555.35
1872	168,980	.20	33,839.20	168,980	.76	128,424.80	.96	162,264.00
1873	180,271	.22	39,659.62	180,271	.74	133,400.54	.96	173,060.16
1874	196,188	.25	49,047.00	196,188	.73	143,217.24	.98	192,264.24
1875	210,450	.22	46,299.00	210,450	.69	145,279.50	.91	191,578.50
1876	214,902	.27	58,023.54	215,127	.71	152,740.32	.98	210,763.71
1877	152,585	.35	53,397.75	152,692	.96	146,584.32	1.31	199,982.07
1878	157,970	.35	55,289.50	158,229	1.00	158,299.00	1.35	213,518.50
1879	161,445	.34	54,891.30	162,657	1.09	177,296.13	1.43	232,187.43
1880	165,521	.40	66,208.40	167,525	1.10	184,277.50	1.50	250,485.90
1881	173,600	.40	69,440.00	173,996	1.10	191,395.60	1.50	260,835.60
1882	177,278	.33	58,501.74	178,131	1.17	208,413.27	1.50	266,915.01
1883	190,901	.43	82,087.43	191,873	1.15	220,653.95	1.58	302,740.38
1884	201,649	.39	78,643.11	202,219	1.33	268,936.64	1.72	347,579.75
1885	215,122	.38	81,746.36	225,214	1.06	238,727.90	1.44	320,474.26
1886	225,930	.42	94,890.60	243,059	.93	226,044.87	1.35	320,935.47
1887	243,645	.52	126,695.40	245,381	.95	233,111.95	1.47	359,807.35
1888	245,875	.72	177,030.00	212,490	2.66	565,233.40	3.38	742,253.40
1889	213,066	1.05	223,719.30	214,568	3.07	658,723.76	4.12	882,443.06
1890	215,755	.61	131,610.55	221,186	3.70	818,388.20	4.31	949,998.75
1891	221,522	.90	199,670.56	227,966	3.20	729,491.20	4.10	929,161.76
1892	228,676	1.22	278,984.72	233,293	3.40	793,196.20	4.62	1,072,180.52
1893	223,685	.96	224,337.60	244,794	3.00	734,382.00	3.96	958,719.60
1894	245,245	1.15	282,031.75	275,468	2.75	757,537.00	3.90	1,039,568.45
1895	276,193	1.15	317,621.95	291,105	2.65	771,428.25	3.80	1,089,050.20
1896	291,776	1.00	291,776.00	293,966	2.00	852,501.40	3.90	1,144,277.40
1897	294,267	1.00	294,267.00	309,019	2.50	772,547.50	3.50	1,066,814.50
1898	309,586	.80	247,668.80	324,651	2.15	697,999.65	2.95	945,668.45
1899	325,013	.90	292,584.28	324,678	2.73	888,023.16	3.63	1,180,607.44
1900	325,766	1.25	407,436.82	341,176	2.65	904,129.65	3.90	1,311,566.47
1901	341,609	1.25	427,512.10	343,463	1.85	635,406.55	3.10	1,062,918.65
1902	343,662	1.30	446,760.60	353,729	2.00	707,458.00	3.30	1,154,218.60
1903	353,918	1.30	460,093.40	352,607	2.30	810,996.10	3.60	1,271,089.50
1904	352,867	1.45	511,657.15	364,592	2.20	802,102.40	3.65	1,313,759.55
1905	365,090	1.50	547,635.00	375,166	2.30	862,881.80	3.80	1,410,516.80
1906	375,289	1.70	637,991.30	378,246	2.29	866,183.34	3.99	1,504,174.64
1907	378,251	1.60	605,201.60	374,919	2.50	937,297.50	4.10	1,542,499.10
1908	375,088	1.90	712,667.20	381,674	2.70	1,030,519.80	4.60	1,743,187.00
1909	381,875	1.80	687,348.00	386,654	3.00	1,160,007.00	4.80	1,847,355.00
1910	386,599	1.90	734,472.10	396,599	3.00	1,189,817.90	4.90	1,924,290.00
1911	396,706	1.90	753,741.40	399,132	3.00	1,197,396.00	4.90	1,951,137.40
1912	399,121	2.00	798,242.00	403,491	3.30	1,331,520.30	5.30	2,129,762.30
1913	403,470	2.00	806,940.00	402,941	3.60	1,450,587.60	5.60	2,257,527.60
1914	403,141	2.20	886,910.20	412,446	3.60	1,484,805.60	5.80	2,371,715.80
Total	.....	.....	.....	.....	.....	.....	.....	$41,702,456.45

[4] *Eighteenth Biennial Report of the State Superintendent of Public Instruction*, 14

[5] *Ibid.*, 12.

TABLE V[6]

Summary for Last Fifty-two Years

Years	Number of Pupils Enrolled in All Public Schools	Number of Schools Receiving Special State Aid						
		High Schools	Graded Schools	Consolidated Schools	Semi-Graded Schools	First Class Rural Schools	Second Class Rural Schools	Class C Rural Schools
1862	32,560							
1864	44,787							
1866	50,564							
1868	81,696							
1870	105,590							
1872	120,352							
1874	128,902							
1876	151,866							
1878	162,551							
1880	180,248							
1882	196,574	38						
1884	223,209	53						
1886	252,053	58						
1888	253,894	57						
1890	280,960	62						
1892	300,333	69						
1894	342,761	85						
1896	354,657	86	87					
1898	384,063	100	97			457		
1900	399,207	115	110		190	662		
1902	414,671	141	119		243	747		
1904	423,663	162	145		270	835		
1906	431,690	192	142		309	1,094	492	
1908	430,748	206	152		340	1,305	632	
1910	440,082	206	165		399	1,860	1,127	
1912	446,083	211	201	32	435	2,453	1,396	555
1914	457,041	215	222	80	463	3,208	1,435	745

TABLE VI[7]

Special Aid Summary

Kind of School or Department	Year Ending July 31, 1914			Year Ending July 31, 1914		
	Number of Schools Aided	Total Amount Paid	Deficit for Each School Not Paid	Number of Schools Aided	Total Amount Paid	Deficit for Each School Not Paid
High schools	216	$378,000.00		215	$471,951.00	
Training departments	80	60,000.00		105	102,842.00	
Agricultural and industrial departments	105	147,322.68		136	268,840.64	
Association		18,950.00			42,950.00	
Graded schools	217	130,200.00		222	165,394.27	
High school departments	59	29,500.00		69	34,500.00	
Consolidated schools:						
Class A	36	48,300.00	$150.00	52	74,100.00	$75.00
Class B	2	1,800.00	100.00	3	2,850.00	50.00
Class C	20	13,500.00	75.00	25	17,800.00	38.00
Building		36,751.00			26,138.00	
Semi-graded schools	451	121,700.00	30.00	463	131,955.00	15.00
Rural schools:						
Class A	2,913	393,255.00	15.00	3,208	455,536.00	8.00
Class B	1,394	125,460.00	10.00	1,435	136,325.00	5.00
Class C	688	46,784.00	7.00	745	52,895.00	4.00
Total	6,181	$1,551,522.68		6,678	$1,984,076.91	
Total amount of deficit			$86,756.00			$49,070.90

[6] *Ibid.*, 13.

[7] *Ibid.*, 27.

TABLE VII-A[8]

STATE AID TO HIGH SCHOOLS YEAR ENDING JULY 31, 1913

216 High schools, $1,750 each	$378,000.00
80 Training departments, $750 each	60,000.00
28 Agricultural departments, $1,817 to $2,500 each	67,646.00
66 Industrial departments, $1,000 each	66,000.00
Association (to central schools) $150 each	14,250.00
Association (to district schools) $50 each	4,650.00
	$590,546.00

TABLE VII-B[9]

HIGH SCHOOLS, YEAR ENDING JULY 31, 1914

215 High schools, $1,930 to $2,200 each	$471,951.00
105 Training departments, $795 to $1,000 each	102,842.00
37 Agricultural departments, $1,712 to $2,500 each	90,253.00
81 Industrial departments, $1,800 each	145,800.00
Association (to central schools) $150 each	34,800.00
Association (to district schools) $50 each	8,050.00
Total	$853,696.00

TABLE VIII-A[10]

GRADED SCHOOLS, YEAR ENDING JULY 31, 1913

217 Graded schools, $600 each	$130,200.00
59 High school departments, $500 each	29,500.00
9 Industrial departments, $1,000 each	9,000.00
2 Agricultural schools	4,676.68
1 Associated district, $50	50.00
Total	$173,426.68

TABLE VIII-B[11]

GRADED SCHOOLS, YEAR ENDING JULY 31, 1914

222 Graded schools, $581.22 to $750 each	$165,394.27
69 High school departments, $500 each	34,500.00
16 Industrial departments, $1,365.08 to $1,800 each	28,356.29
2 Agricultural departments, $2,100.00 to $2,500 each	4,431.35
2 Associated districts, $50 each	100.00
Total	$232,781.91

TABLE IX-A[12]

STATE AID TO CONSOLIDATED SCHOOLS, YEAR ENDING JULY 31, 1913

36 Class A schools, $1,050 to $1,350 each	$48,300.00
2 Class B schools, $900 each	1,800.00
20 Class C schools, $675 each	13,500.00
Building aid	36,751.00
Total	$100,351.00

[8] *Eighteenth Biennial Report of the State Superintendent of Public Instruction*, 27

[9] *Ibid.*, 34.

[10] *Ibid.*, 30.

[11] *Ibid.*, 37.

[12] *Ibid.*, 40.

TABLE IX-B[13]

CONSOLIDATED SCHOOLS, YEAR ENDING JULY 31, 1914

52 Class A schools, $1,425 each	$74,100.00
3 Class B schools, $950 each	2,850.00
25 Class C schools, $712 each	17,800.00
Building aid	26,138.00
Total	$120,888.00

TABLE X-A[14]

SEMI-GRADED SCHOOLS, YEAR ENDING JULY 31, 1913

451 Schools, $270 each	$121,700.00

TABLE X-B[15]

SEMI-GRADED SCHOOLS, YEAR ENDING JULY 31, 1914

463 Schools, $285 each	$131,955.00

TABLE XI-A[16]

CLASS A, YEAR ENDING JULY 31, 1913

2,913 Schools, $135 each	$393,255.00

TABLE XI-B[17]

YEAR ENDING JULY 31, 1914

3,208 Schools, $142 each	$455,536.00

[13] *Ibid.*, 50.
[14] *Ibid.*, 41.
[15] *Ibid.*, 51.
[16] *Ibid.*, 43.
[17] *Ibid.*, 52.

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THE MEANING AND FUNCTION OF SIMPLE MODES IN THE PHILOSOPHY OF JOHN LOCKE

BY

RUPERT CLENDON LODGE, M.A.

Assistant Professor of Philosophy in the University of Minnesota

MINNEAPOLIS
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PREFACE

Enthält nichts Neues—variiert Bekanntes. Such is the epitaph of five sixths of the monographs on Locke, and it is almost a commonplace that nothing remains to be gleaned from that much threshed-over field, his *Erkenntnistheorie.* And yet . . . is this so very certain? True, there is a heart-breaking sameness about most of the *literature;* Locke is a quasi-Kantian; "contingent-necessary," "empirical-rational"—such is the magic formula with which the critics (and their name is legion) would open the way to the treasure cave. But is the result *Locke?* Surely not. The present study is a concrete plea for a return to Locke himself. This does not mean that we are to deprive ourselves of the advantages of a more modern standpoint. It does mean that we are not to commit the psychologist's fallacy, and read our own selves into a writer for whom our two and seventy jarring sects are still non-existent.

RUPERT CLENDON LODGE

University of Minnesota,
May, 1917

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THE MEANING AND FUNCTION OF SIMPLE MODES IN THE PHILOSOPHY OF JOHN LOCKE

INTRODUCTION

THE PRESENT STATE OF KNOWLEDGE CONCERNING LOCKE'S SIMPLE MODES

The meaning of the term "simple mode" in the philosophy of Locke has been felt as a difficulty by all Locke students. Leibniz[1] made many characteristic suggestions which, if adopted, would involve radical alterations in the whole *Essay;* and even in the modern era of sympathetic interpretation the concept has always been considered unsatisfactory. Tagart[2] feels this unsatisfactoriness in regard to both simple and mixed modes, but perhaps more especially in the case of mixed modes. The terms seem to him to be obsolete, a reminiscence of the jargon of the schools from which Locke has not been able wholly to emancipate himself; difficult to understand, and without any corresponding advantage, they are to be regarded as defects in his work. Webb,[3] on the other hand, emphasises peculiarities of the simple modes only; to him these appear to involve the admission by Locke of an a priori element of thought, a suggestion of intellect occasioned by an "innate impotence of thought," as well as the universally recognised creation of modes by the mind in composition. To Webb himself this does not appear unsatisfactory, but as it is emphasised by him as a case of "intellectualism," his view is tantamount to a statement that the simple modes have been seriously misunderstood by all who have not interpreted Locke as an "intellectualist"—in other words, that they have furnished difficulties too great for almost all writers on Locke up to the time of Webb.

Hartenstein,[4] who has no such paradoxical thesis to maintain, though he too lays stress on the intellectual elements in Locke's philosophy, insists that the conception of modes is indeterminate and vacillating to a degree: the examples do not agree with the definitions, and the distinction drawn between modes and relations is not carried through. Turbiglio,[5] who is interested in constructing a priori the empirical philosophy of Locke, notes particularly that the modes are ideal constructions not arising from experience, and that consequently all knowledge based on them has a

[1] See especially *Nouveaux Essais*, ed. Gerhardt. 5:146 ff.

[2] *Locke's writings and philosophy* . . . London. 1855. pp. 401, 40-41 note.

[3] *The intellectualism of Locke.* Dublin and London. 1857. esp. p. 90.

[4] *Locke's Lehre von der menschlichen Erkenntniss* . . . Leipzig. 1861. pp. 135, 136, 141.

[5] *Analisi storica delle filosofie di G. Locke* . . . Torino. 1867. pp. 6, 8, 89.

merely ideal signification, a value which is hypothetical and relative when we attempt to apply it to the actual world of sense-experience. That Locke should have relegated scientific knowledge in the strict sense to precisely this field, is regarded as a serious error.[6]

Von Benoit,[7] like Hartenstein, whom to some extent he follows, lays stress on the rationalist elements in Locke's thought. After indicating the indeterminate and ambiguous character of the conception of simple modes by showing that many instances are elsewhere treated as simple ideas, while others again are regarded as relations,[8] he lays especial emphasis upon their ideal nature. As the free creations of thought in accordance with its own laws, the laws of pure logic, they transcend experience, and von Benoit, while himself doing full justice to the validity of mathematics and ethics, is astonished that Locke should attempt to attribute to them real as well as nominal essences.[9] Riehl[10] carries this idealistic interpretation even further, and argues that Locke's view leads up to and requires a specifically Kantian solution of the problems which his method raises but can not solve. Thus mathematics is seen to depend throughout on construction, and infinity is treated as a product of mental synthesis rather than as the outcome of empirical sense-perception. In a word, Locke's correct recognition of the synthetic nature of thought is too subjective, too introspective, to do more than call for an objective, "critical" solution, such as is furnished by Kant.

Green[11] finds an *impasse* in the account of simple modes; it seems to him a hopeless contradiction that Locke should maintain, on the one hand, that modes, as complex ideas, are the mere workmanship of the mind, and on the other, that the simple ideas, of which they are "modifications," are taken from the things themselves. It appears to Green, either that modes are subjective constructions, in which case they can not be "found in things existing," or else that they have objective signification, in which case they can not be the *mere* workmanship of the mind. He discovers a further *aporia* in the relation of simple ideas to the simple modes: if this is, as Locke states, a substance-affection relation, then the simple ideas are being regarded as substances, i.e., as *complex* ideas: so that there is a conflict between Locke's actual treatment of modes, as modifications of substance-ideas which are complex, and his express statements, that they are modifications of ideas which are definitively simple. Manly,[12] following up a

[6] *Analisi storica delle filosofie di G. Locke.* 57-58, 59, 63.

[7] *Darstellung der Locke'schen Erkenntnisslehre . . .* Bern. 1869. p. 81. Cf. Hartenstein, *op. cit.* 222, 251-52.

[8] Von Benoit, *op. cit.* 19, 20, 22, 24.

[9] *Ibid.* 21, 25-26, 35-36, 38, 41, 45-46, 52, 79; cf. p. 28.

[10] *Der philosophische Kriticismus.* Leipzig. 1876. pp. 36, 48, 56, 58. Cf. W. Wundt, *Logik*, 3e Auflage. Stuttgart. 1907. 2:121.

[11] *General introduction to Hume's Treatise*, new ed. 1878. 1:sec. 33, pp. 26-27.

[12] *Contradictions in Locke's theory of knowledge.* Leipzig. 1885. p. x.

suggestion of Cousin's, but without himself adopting any philosophical position, similarly discovers a number of "contradictions" in Locke's work. Among these "contradictions," particularly good examples for Manly's thesis appear to be furnished by the modes, both simple and mixed. Most of the cases are found to center around the distinction of simple and mixed modes,[13] of simple modes and simple ideas,[14] and of modes and relations.[15] Incidentally, many instances of simple modes are criticised as "contradicting" their definition.[16]

Curtis[17] is interested especially in the idealistic interpretation of Locke's thought, and regards the idea of power less as a simple mode and more as a simple idea created by intellect, and not furnished by sensation and reflection. So, too, of time and space, right and wrong. In the case of mixed modes especially, he attempts to show that they are combined by Locke not merely analytically, but also synthetically, and argues that it is only by such synthesis that a constructive science of pure ethics can be called into being.[18] Von Hertling[19] points out two tendencies, an empirical and a rational, running through Locke's work. From the empirical standpoint, the activity of mind in forming the various complex ideas is restricted to a purely mechanical combination and separation of unalterable elements. That is to say, while the mental construction itself may be purely arbitrary, as in the case of mixed modes especially,[20] all that is objectively present is the elements themselves, which are in themselves isolated, and remain so, whatever relations we subjectively read into them. From this view-point even the simple modes used in mathematical science are treated as if they were mixed modes.[21] Hence arises the problem as to how such subjective constructions can give us objective, scientific knowledge. Von Hertling decides that the problem in the case of both simple and mixed modes is strictly insoluble, so long as Locke emphasises the complete freedom and arbitrariness of mental construction.[22] However, in Book IV of the *Essay* especially, though also in the other books, we meet with a very different line of thought: the ideas are no longer separate elements, susceptible of merely mechanical combination; they stand in

[13] *Ibid.* 52-53.

[14] *Ibid.* 47-49, 51-53, 58.

[15] *Ibid.* 46-47.

[16] *Ibid.* 46, 50, 51-53. Cf. Leibniz, *Nouv. Ess.*, ed. Gerhardt. 5:240a.

[17] *Locke's ethical philosophy.* Leipzig. 1890. pp. 36-37. Cf. Noah Porter. *Human intellect*, 4th ed. p. 521.

[18] *Locke's ethical philosophy.* pp. 69-74; most of the arguments apply also to simple modes and the construction of a synthetic science of mathematics.

[19] *John Locke u. d. Schule v. Cambridge.* Freiburg. 1892. esp. pp. 9, 12, 17.

[20] *Ibid.* 21; the argument applies also to simple modes.

[21] *Ibid.* 23-26.

[22] *Ibid.* 27-30. Cf. 241-42.

certain relations to one another, and we intuitively perceive these objective relations whenever we choose to compare the ideas. According to this line of thought, only our decision to compare or not to compare is arbitrary; apprehension of the relation as it is objectively, follows of necessity, and advance in scientific knowledge consists in discovering and systematising precisely such relations.[23] These two lines of thought are never satisfactorily united by Locke.[24]

Fraser[25] is interested in showing that Locke's logical analysis of consciousness does not sufficiently take into account intellectual and rational elements. In fact, many of the simple modes are "intellectual suggestions," and can only receive inadequate treatment from Locke's point of view. As compared with simple ideas, which are *minima sensibilia*,[26] the simple modes are composites produced by "enlarging";[27] some of them resemble simple ideas in many ways, but certain instances obstinately refuse to agree with this statement.[28] As compared with "things," Fraser regards them as ideas of the manner of operation of things, or as qualities considered in abstraction from substance.[29] Modes and things are both alike quality-complexes: the difference consists in the absence or presence of a connection with the idea of a supporting "something"; in fact, where such a connection is present, abstracted modes are transformed into concrete things.[30] From the point of view of the knowledge which they furnish, Fraser regards the modes on the one hand, as giving us merely abstract and verbal knowledge, in accordance with Locke's "analytical" method, though on the other, perhaps they may give us knowledge of certain special relations.[31]

Martinak[32] is the first to face the difficulties connected with the concept of simple modes by attempting to classify the chief instances mentioned by Locke. He divides them into simple modes (1) of primary qualities, (2) of secondary qualities, (3) of ideas of reflection, and (4) of ideas of both sensation and reflection. Each of these classes is further divided in accordance with indications in the *Essay*. In regard especially to mixed modes, Martinak insists that they may be derived from experience, and are not

[23] John Locke u. d. Schule v. Cambridge. 62-73. Cf. 83, 87-88, 214, 239-41.

[24] *Ibid.* 87-88. Cf. 92-93, 241-42, 273. Cf. also Wundt, *op. cit.* 120-21.

[25] *Locke.* London. 1890. pp. 122-27. Ed. of *Essay.* Oxford. 1894. I pp. 253, 255, 264, 283, 308, 311; cf. II 236 n.4, 387, notes.

[26] Ed. of *Essay.* I pp. 265, 293, etc., notes.

[27] *Ibid.* I p. 205. See also *infra*, appendix.

[28] Ed. of *Essay.* II p. 42., cf. Locke, *Essay.* III iv. 17, p. 42.

[29] Ed. of *Essay.* II p. 460, cf. I p. 215, notes.

[30] *Ibid.* I p. 422.

[31] *Ibid.* I pp. 232-34, notes, 236 n. 4, II 373 n. 2, cf. p. 346, and I p. 218, notes.

[32] *Die Logik John Locke's.* Halle. 1894. pp. 8-10.

necessarily arbitrary,[33] but he finds a number of special *aporiae* arising out of his comparative study. Thus "mode" is, he believes, used (1) as accident, (2) as modification or variety, (3) as combination—a threefold sense which is responsible for much confusion. Hence arises the difficulty as to whether certain ideas are simple ideas or simple modes, and also the generally recognised vacillation between simple modes and relations in other cases.[34] Martinak does not appear to feel Hertling's problem as to how objective science could rest upon such subjective creations.[35]

Messer[36] indicates very forcibly the unsatisfactoriness of Locke's position in regard to simple ideas and simple modes, and believes that he to some extent takes back his earlier statement as to the arbitrariness of simple modes: to some extent they are after all received passively, just as simple ideas are. Locke is blamed for being inexact, and Messer concludes that such a concept as "power," while being dealt with among the simple *modes*, is actually regarded as a simple *idea* received passively by the mind. Freytag[37] emphasises the absence of a sharp line of demarcation between simple ideas and simple modes, especially in the case of succession and power.

Morse[38] finds that simple-complex, clear-confused, adequate-inadequate, are not really attributes of the idea considered as an independent psychological "thing," and further, that if we use these terms strictly with one identical meaning, we can not say that ideas of substances are less adequate or clear, etc., than are modes or even simple ideas,—i.e., that simple ideas, modes, and substances, considered as ideas, are all equally and in the same sense adequate or inadequate, clear or confused: the sense being, so far as these terms are taken to signify functions of ideas in judging. Kayserling[39] lays stress on the "contradiction" that simple modes are, on the one hand, distinguished from simple ideas, while on the other, certain of the instances of simple ideas coincide with instances of simple modes; thus, pleasure, pain, and power are in fact simple presentations, taken in passively, as "given," by the mind. Kayserling appears partly at times by direct reference, partly, as here, by internal evidence, to be influenced by Messer.

Riehl,[40] in the second edition of his main work, regards the term "mode" as used in an extremely wide and indeterminate sense; it seems to him to

[33] *Ibid.* 11.

[34] *Ibid.* 49-50.

[35] *Ibid.* esp. 79.

[36] *Die Behandlung des Freiheitsproblems bei John Locke. Archiv f. Gesch. d. Philosophie.* 1897-1898. pp. 411-13.

[37] *Die Substanzenlehre Lockes.* Halle. 1898. p. 20.

[38] *Ueber den Widerspruch im Wahrheitsbegriff in Lockes Erkenntnislehre.* Jena. 1904. pp. 27-36. Cf. A. W. Moore, *The functional versus the representational theories of knowledge in Locke's Essay.* Chicago. 1902. pp. 27ff. and 45.

[39] *Die Willenstheorie bei John Locke . . .* Leipzig. 1907. esp. p. 17.

[40] Riehl, *op. cit.*, 2e Auflage. Leipzig. 1908. p. 50. Cf. Benno Erdmann, *Logik*, 2e Auflage. Halle a.S. 1907. pp. 100-1.

cover everything except simple ideas, and ideas of substances and relations. Alexander[41] points out the peculiar situation which arises from modes being, on the one hand, mere affections, mere creatures of the mind, and being, on the other hand, applicable, in mathematics and ethics, also to sensible reality. In mathematics and ethics, he urges, they are treated, not as mere affections, but as real in their own right, "floated off into an atmosphere of their own," in which they constrain us to think about them in various ways, much as if they were sensible objects; and this, not because Locke supposes them to correspond to anything in the nature of mind, but because they are triangles, circles, or moral ideas. On the one hand, they have no actual existence, and yet they have a reality of their own and are exemplified in the world of actual existence.

Dathe,[42] in dealing with the ideas from a logical point of view, finds "absolutely unintelligible" Locke's regarding as *simple* such ideas as space, figures, rest, and motion, on the one hand, and pleasure, pain, existence, unity, power, and time, on the other. He points out that Locke himself subsequently treats space, extension, infinity, the varieties of motion, of the senses, and of thought, i.e., pleasure, pain, and power, as simple modes. From the epistemological standpoint, he finds it strange that Locke should regard such a proposition as "a harpy is not a centaur" as on a different level from the propositions of mathematics and ethics: for these also deal with fictitious mental creations, and in fact it is hard to see how such subjective constructions could have objective validity in the world of sense-experience.[43]

Ollion[44] cautions us against attributing to Locke's terms any signification other than that suggested by simple observation. On the one hand, following Martinak, he treats the conception of simple modes as ambiguous:—(1) some modes correspond to the definition: these belong to the logical category of "accidents"; (2) others are combinations of simple ideas, as we see in the case of numbers: these are not accidents, unless perhaps number is to be understood as an attribute of physical objects; (3) others again are modifications of a single simple idea: e.g., the simple modes of color and motion.[45] On the other hand, he urges that Locke is here speaking conformably to popular notions, i.e., in accordance with "simple observation," and not as a strict scientist. Ollion is thus able to account for ambiguities in detail, e.g., as to whether a given instance is a mode (popular sense) or a relation (scientific), and even goes so far as to treat the distinction between simple ideas and simple modes as

[41] *Locke.* London. 1908. esp. p. 61.

[42] *Die Erkenntnislehre Lockes.* . . Dresden. 1909. pp. 15, 17.

[43] *Ibid.* 31, 54.

[44] *La philosophie générale de John Locke.* Paris. 1909. pp. 168-69.

[45] *Ibid.* 288, cf. Martinak, *op. cit.* 49-50.

popular only. From a strictly scientific view-point, he insists, the category of relation would seem to swallow up the other two.[46] The question as to the objective validity of moral judgments he tries to solve by suggesting that their composition, which is derived, not from experience but from our minds, depends on a fact superior to experience, viz., our true nature as ethical beings.[47] The distinction between idea as representation and idea as concept is appealed to in order to solve such problems as the treatment by Locke of one and the same idea, now as simple, now as complex,[48] and also certain questions connected with infinity.[49] Locke's philosophy is interpreted throughout as "critical" idealism.[50]

Tongers[51] shows that the objectivity of modal knowledge rests upon the nature of the ideas themselves, so far as these ideas can be seen to fit into an a priori system. This ideal system, however, is not epistemological, but ontological, and is naïvely presupposed by Locke. Köhler[52] emphasises the remarkable treatment accorded to the idea of power, which is at times regarded as a simple idea, at other times as a simple mode; he insists upon the ideal nature of the simple modes of space and duration, as mental constructions,[53] and on the question of objectivity, points out that Locke paves the way to a modern view of thought as simple intuition of relations subsisting between the elements of the thinkable.[54]

Summary

The chief difficulties experienced in modern interpretative criticism, as exemplified in the above historical sketch, fall into two main groups. To the first group belong all questions concerning the meaning of the conception;—whether the term is ambiguous, whether the instances given square with the definition or not, whether some simple modes are also simple ideas or relations, and whether some instances are treated as if they were "mixed" modes. In the second group may be placed all questions concerning the epistemological function of simple modes. These are of two kinds:—(1) as to whether modal knowledge is synthetical, or merely analytical, and (2) as to how any manipulation of merely subjective constructions can be supposed to give us objectively valid knowledge.

A study of these difficulties experienced by the critics is complicated by the difference of standpoint among the critics themselves: some of

[46] *Ibid.* 200-1, n., cf. 235, n.

[47] *Ibid.* 221 and 211, where "power" is similarly treated.

[48] *Ibid.* 227, 233.

[49] *Ibid.* 238-39, n.2, cf. also 465, 471.

[50] *Ibid.* 471.

[51] *Lockes Wirklichkeitsbegriff.* Halle. 1910. pp. 23-28, 38-44, 51-52, 58-59.

[52] *Die Aktivität der menschlichen Seele bei Locke.* Borsdorf—Leipzig. 1913. pp. 36-37.

[53] *Ibid.* 40.

[54] *Ibid.* 55, 75-76, cf. Wernicke, *Vierteljahrsschrift f. wissensch. Phil.* 1882. p. 106.

them regard Locke as a sensualist,[55] or as a pure empiricist;[56] others as a realist;[57] many as an idealist,[58] and, since Drobisch, not a few of them are more specific, and proclaim him a "critical" idealist.[59] These radical differences of interpretation say much for the enduring vitality and suggestiveness of Locke's work. But the conclusion can hardly be avoided that he is at the same time all and none of these: and an attentive and unbiased reading confirms the conclusion. In Locke's writings empiricism and realism, sensualism and idealism, psychologism and "criticism," are all held in solution; and if we wish to be just to Locke himself, instead of critically reconstructing his work from some special standpoint, we shall not begin by selecting one or even two[60] of his many-sided tendencies as all-important, but shall try to deal with him as he is: a philosophic enquirer after truth, rather than a representative of any one particular school.[61] He has himself indicated the spirit in which he should be studied:—"First, I endeavor to understand the words and phrases . . ., i.e., to form the ideas they stand for; and if there be any expression which . . . seems to have a peculiar meaning, that idea also I endeavor to form in my mind, by comparing the author with himself, and observing the design of his discourse, so that, as far as I can, by a sincere endeavor, I may have the same ideas in every place when I read the words, which the author had when he writ them."[62] It is in this spirit that the following pages are devoted to investigating the meaning and function of simple modes in his philosophy.

[55] Cousin.

[56] Turbiglio.

[57] Messer, Tongers.

[58] Hartenstein, von Benoit, Webb.

[59] Riehl, Dathe, Ollion. H. G. Hartmann regards Locke as a "constructive relativist."

[60] As von Hertling and Wundt do.

[61] Cf. Locke's attitude to "parties," *passim*, esp. letter to Molyneux, March 30, 1696. Works (London, 1823). IX p. 378.

[62] Works. IV pp. 341-42.

CHAPTER I

CLASSIFIED LIST AND PRELIMINARY EXAMINATION

In Locke's use of language, "mode" and "modification" appear to be used interchangeably. One and the same idea is said to "be modified" or to "have modifications in it" indifferently, and the terms "modification," "mode," and in some cases "degree," are applied in the same sense to the same instances.[1] The problem before us in the present chapter on the meaning of simple modes is thus (1) to present a complete list of the terms recognized by Locke as simple modes, modifications, or, in some cases, degrees; (2) to examine briefly the instances in question in order (3) to frame a tentative conclusion as to the meaning of the concept for Locke. For this purpose, the relevant material is drawn primarily from the *Essay*, particularly from the second and fourth books, and secondarily from the Stillingfleet controversy and *Conduct of Understanding*, and also from certain other minor writings, of which some are published in Locke's Works, while others are found in the journals and miscellaneous papers in the biography by Lord King. The material from these minor sources can only be used to supplement material drawn from the *Essay*.

In presenting such a list of simple modifications, it seems advisable to adopt, at least provisionally, some plan of classification. With this view we might select some *fundamentum divisionis* not contradictory to the spirit of Locke's thought, and useful as a means of introducing order and clearness into the considerable amount of material.[2] But perhaps it is less arbitrary, and no less clear, to adopt the hints scattered through the *Essay*, which seem to indicate the way in which Locke himself may have felt about the simple modes from the point of view of furnishing a complete list. There appear in fact to be two bases for possible classification of which he is more or less clearly aware. On the one hand, he tends to

[1] Cf. II xix 1, p. 298: "variety of *modifications in* thinking," the chapter being entitled "of the *modes* of thinking." Cf. also "thinking is . . . *modified*" (II xxii 10, p. 387). In II xviii 2, p. 294, to roll, slide, etc., are spoken of as "*modifications* of motion," while the section-heading reads "simple *modes* of motion." Cf. also II xviii 6, 7, pp. 295, 297; xxii 11, p. 388; xxiii 30, pp. 416-17, etc. In the case of "modifications of matter" (the primary qualities) these, while not strictly *in pari materia*, are also definitely referred to as "modes" in the Stillingfleet controversy. They are therefore added to our list in this chapter.

[2] Martinak (*Die Logik Lockes*, p. 10) classifies simple modes as (1) derived from simple ideas of primary qualities (space, duration, number, motion), (2) derived from simple ideas of secondary qualities (sound, color, smell, and taste), (3) derived from reflection (modes of thinking), (4) derived from simple ideas of both sensation and reflection (pleasure, pain, power). This classification appears to be arbitrary, and is inconsistent not only with the general indications of Locke's view mentioned below (in the text), but also to express detailed statements of Locke. Thus, for Locke, secondary qualities (2) are modifications of primary qualities, and should thus be classed under (1); primary qualities (1) are derived from both sensation and reflection, and should thus be classed under (4); "anger" and "envy" are mixed, not simple, modes of pleasure, and "fearing" and "hoping" are regarded by Locke, not only as modes of pleasure-pain, but also explicitly as modes of thinking (3). There are also serious omissions. Cf. with his list, II xxiii 5, p. 395, xxiii 30, p. 417.

regard simple modes as (a) "collective," i.e., as "varieties" arising from the process of adding a simple idea to itself,[3] and (b) as "degrees" of some simple idea, as for example satisfaction and happiness represent different degrees of pleasure.[4] At other times he appears to think of the classes of simple modes in terms of the simple ideas of which there are very many recognisable modifications, as number, duration, expansion (including figure), motion, power, thinking.[5] For the purpose of preliminary classification, it seems preferable to attempt to carry out this second hint of Locke's. It can not be carried through perfectly, but is at least thoroughly Lockian, even in its imperfection.[6] We shall therefore proceed to classify all simple modes, as far as possible, under the headings (1) simple modes of number, (2) simple modes of duration, (3) simple modes of expansion, (4) simple modes of motion, (5) simple modes of power, (6) simple modes of thinking, and shall then add two further groups, (7) simple modes of pleasure and pain, and (8) simple modes of matter. The instances in the last group appear to be at least partly anomalous, but there is sufficient authority for including them at the present stage.

1. *Simple modes of number.* Number, numbers (1, 2, 3, 4, 5, 6, 7, 10, 20, 90, 91, 100, 144, 200, 1,000, 9,000, 1,000,000, etc.), fractions (½, ¼, etc.), finite, infinite.[7]

2. *Simple modes of duration.* Measures or lengths of duration (seconds, minutes, hours, days, years, ages), time, finite duration, eternity or infinite duration.[8]

3. *Simple modes of expansion.* Distances, measures or lengths of expansion (inch, foot, pace, cubit, yard, span, perch, furlong, mile, parasang, square feet, cubic feet), superficies, figure, lines, diagonal, radius, corners, angles, triangle, rectangle, square, round, circle, arc of circle, circumference, center of circle, oval, ellipse, conic sections, cube, chiliaedron, globe, place, space, finite expansion, immensity or infinite expansion.[9]

[3] II xvi 5, pp. 271-72; xxiv 2, p. 424.

[4] II vii 2, p. 161; xviii 6, p. 295.

[5] II xiii 5, p. 221; xvii 6, 22, pp. 280-81, 293; xviii 6, p. 296; xxii 10, pp. 386-87.

[6] II xv 9, p. 265, note (dictated to Coste); Nous devons assorter les choses le mieux que nous pouvons, *doctrinae causa*; mais, apres tout, il se trouvera toujours quantité de choses qui ne pourront pas s'ajuster exactement avec nos conceptions et nos façons de parler. Locke is here dealing with the question whether space is to be classed as a simple idea; his answer, according to Manly (*Contradictions in Locke's theory of knowledge*, p. 47), shows that it is a simple mode.

[7] IV xxi 2, p. 461, cf. *Jour.* 1676, King 1:123. Numbers: II xii 5, p. 215; xvi 5, pp. 271-72; xxiv 2, p. 424. Fractions: II xvii 18, p. 290. Finite and infinite: II xvii 1, 12, pp. 276, 285.

[8] II xiv 1, 31, 37, pp. 238, 252-53, 255; xv 1, 3, 9, pp. 258, 259, 266; xvii 6, 15, 20, pp. 280, 286, 291. Time: II xiv 1, 31, pp. 238, 255-56; xv 5, p. 271. Finite and infinite duration: II xiv 30, p. 255; xvi 8, p. 274; xvii 2, p. 277.

[9] II xiii 4, p. 220; xv 1, 9, pp. 258, 266; xvii 18, p. 290; IV v 6, p. 247; cf. *Jour.* 1678, King 2:182-85. Foot . . . : II xi 6, p. 205; xiv 23, p. 251; xv 2, p. 258; xvii 19, p. 283; cf. *Jour.* 1678, King 2:177. Superficies . . . : II xiii 5, 6, pp. 221-22; xxxi 2, p. 503; IV xxi 2, p. 461. Lines . . . : V iv 9, p. 234. v 6, p. 247; Works IV p. 232; *Conduct of U.* sec. 9, (ed. St. John) p. 49; cf. *Jour.* 1681, King 1:226-27; Triangle: II xii 4, p. 215; xxv 6, p. 429; III iii 18, pp. 28-29; ix 19, p. 118; cf. *Ex. Malebr.* sec. 47, (ed. St.

4. *Simple modes of motion.* Slide, roll, tumble, walk, creep, run, dance, leap, skip, etc.[10]

5. *Simple modes of power.*

6. *Simple modes of thinking.* Sensation, remembering, recollecting, imagining, reverie, dreaming, ecstasy, intention or study (with degrees of attention), contemplation, apprehending, comprehending, discerning, perceiving, conceiving, judging, reasoning, thinking, knowing, believing (faith), adhering, degrees of assent, instilling, preferring, choosing, willing, ordering, directing, commanding, doubting, conjecture, guess, wavering, distrust, disbelief, fearing, hoping, disgust, disturbance, tranquillity. To these should perhaps be added:—sagacity, illation, demonstration, intuition, probable reasoning.[11]

7. *Simple modes of pleasure and pain.* Satisfaction, delight, pleasure, happiness, infinite happiness; uneasiness, trouble, pain, torment, anguish, misery, etc.; the passions (love, hatred, desire [with its degrees, such as velleity], joy, sorrow, hope, fear, despair, shame); more simple modes (pleasures of eating and drinking, of music, of rational conversation with a friend, of well-directed study in the search and discovery of truth; pain of hunger and thirst, of teeth set on edge, pain from captious uninstructive wrangling).[12]

8. *Simple modes of matter* (*anomalous?*). Primary qualities (extension, figure, bulk, solidity, texture or cohesion of parts, motion, rest), secondary and tertiary qualities, degrees of secondary qualities (degrees of whiteness, sweetness, light; shades of color, modifications of sound such as words, tones, tunes; all compounded tastes and compounded smells).[13]

These eight groups contain a complete list of the instances of simple modes actually mentioned as such or necessarily implied by the context to be such, in the writings of Locke. The instances given do not represent a complete list of simple modes, i.e., of all terms actually so used by men, and there is, in the nature of the case, no means of furnishing a list of all the possible modifications of simple ideas; but it is reasonable to expect that an examination of all the instances actually furnished by Locke should

John) p. 450; cf. *Jour.* King 1:224. Rectangle . . . : II xix 2, p. 299; IV i p. 169; iv 1, 6, 8, pp. 227. 231, 233. Round . . . : II xxiii 6, pp. 396-97; III iii 19, p. 30; IV v 4, p. 245; xvii 14, p. 407; cf. *Refut. Norris* sec. 4, (ed. St. John) p. 462. Oval . . . : III iii 14, p. 25; II xxix 13, p. 493; xxxi 11, p. 511; cf. *Jour.* 1677, King 2:176. Place . . . II xiii 10, p. 225; xv 5, 9, pp. 261, 266. Finite expansion . . .: II xvi 8, p. 274; xvii 2, 3, 15, pp. 277-78, 286-87.

[10] II xviii 2, p. 294; xxi 17, p. 322.

[11] II i 20, p. 139; vi 1, p. 159; xix 1-2, pp. 298-99; xxi 5, 15, 17, pp. 313, 320-22; xxiii 30, p. 417; III i 5, p. 5; IV xvi 9, p. 377; xvii 2, 15, pp. 386-87, 407-8; *Educ.* secs. 34, 44, 78; Works IV pp. 32-33.

[12] II vii 2, p. 161; xxiii 33, p. 418; III vi 11, p. 66. Passions: II xx *passim.* More simple modes: II xx 18, p. 307.

[13] II xxiii 3, pp. 393-94; xxxi 2, p. 503; IV vi 14, p. 264; Works IV p. 29; cf. *Nat. Phil.* sec. xi, (ed. St. John) p. 492; *Ex. Malebr.* sec. 10, p. 421. Secondary, etc., qualities: II viii *passim*, esp. secs. 23-24, p. 179; xxiii 30, pp. 416-17; xxi 3, 75, pp. 310-11, 373; cf. *Nat. Phil.* p. 491; *Essay*, II xxiii 7, p. 397. Degrees . . .: II iii 1, p. 149; xiv 14, p. 245; xvi 3, p. 271; xviii 3-6, p. 295.

prove sufficient at least to let us discover what he means by them, and what their function is in his philosophy. We shall proceed inductively, taking one group at a time, and endeavoring to discover on what ground the instances in each group are classed together as simple modes.

1. Simple Modes of Number

In the first group it is first necessary to discover what the simple idea is, of which the various numbers are modes. They have been classed as modes of number. Is "number," then, the simple idea in question? At first sight it might seem so. We are told frequently that number is a simple idea, the simplest of ideas, one of the most modified of ideas, one of the most primary and original ideas.[14] This looks as though it might be the simple idea sought at present. But there are many other passages which appear to indicate that the number one, or unity, is the simple idea modified in this group: and a more minute examination shows that this last is really Locke's meaning. He seems to use "number," "unity," and "one" somewhat indifferently as a rule; but when he has occasion to express himself more distinctly, it is evident that unity or one represents for him the definitively simple idea in this group. As an example of his less careful way of writing, we might take Chapter XVI of the second book. This is entitled, "Idea of *number*," and the heading of the first section reads, "*Number* the simplest . . . idea"; but in the section itself we find that there is no idea "more simple, than that of *unity*, or *one* . . . it is the most universal idea . . . for *number* applies . . . to everything." The second section is entitled, "Its modes"—*sci.* modes of *number*—"made by addition," but the content of the section shows plainly that it is not "number," but *ones* or *units* which are added. Elsewhere he expresses himself more explicitly. It is by putting together the repeated ideas of unity, or by joining the idea of one to one, etc., that we construct the numbers; and Locke seems to think of "number" as a complex idea, "consisting of additions of finite units one to another," in fact as a progressive series consisting of collections of units. From a consideration of this evidence,[15] it appears that unity or one is the simple idea, of which the instances in this group are simple modifications.

In what sense are the various numbers to be regarded as "modes" of unity or one? Simple ideas arise from sensation or reflection, etc., and the simple idea of unity arises from both: but the numbers themselves, two, a dozen, a million, etc., do not come into the mind by sensation and reflection. They are man-made, mental constructions generated by a process which first abstracts the unit from the simple sense-experiences of unity,

[14] II viii 9, p. 170; x 6, p. 197; xvi 1, p. 270; xxi 75, p. 373; III ix 19, p. 118.

[15] II xii 5, p. 215; xiii 1, p. 218; xvi 5, pp. 271-72; xvi 7, p. 274; xvii 13, p. 296; xxiv 2, p. 424.

and then by a further process, known as compounding, or more specifically "enlarging," extends the numerical series by adding one to one so as to produce two, one to two so as to produce three, etc., and providing each member of the progressive series so obtained with a special name, which serves to distinguish it from every other number. Abstracting, enlarging, naming: these are the three phases of the process of generating the number-series; and numbers are accordingly regarded, *quā* complex ideas consisting of units or collections of units, as "collective" modes. It is as repetitions, enlargements, collections of units, that the numbers are regarded as simple modes of unity.[16]

What are we to say of finite and infinite? Are these also complex ideas, formed by adding units together? Locke refers to them definitely as "modes of quantity," applicable primarily to that which has parts and is capable of more or less, i.e., especially to the number-series with its addibility and divisibility. They arise from contemplating the power of the mind to enlarge its quantitative ideas without end. This power of the mind suggests the idea of infinite, as the units themselves give us the idea of finite. Infinite and finite are thus not exactly "collective modes," but arise from a consideration of the collectively-generated series, by reflection on the way in which our minds produce it.[17]

2. Simple Modes of Duration

What is the simple idea modified in the second group? Is it "duration"? At first sight it might seem so. Duration is referred to as a simple idea, one of the most modified of simple ideas, one of the primary and original ideas from which all other ideas can be derived.[18] And yet, just as "number" for Locke consists of units, so here also, examination shows that the simple idea in this group is a kind of unit in duration, a moment or instant, the brief portion of duration during which one idea can be held before the mind in the natural succession of ideas. The simple idea, then, of which the instances in the second group are simple modifications, is thus the "moment" or psychological duration-unit.[19]

In what sense are the various lengths of duration to be regarded as "modes" of this duration-unit? The simple idea is here fundamentally

[16] I i 15, pp. 48-49; xi 6, p. 205; xii 5, p. 215; xiii 1, p. 218; xvi 2, 5, 7, pp. 270-74; xxiv 2, p. 424; xxxi 14, p. 513; Works IV p. 11; cf. *Jour.* 1678, King 2:123. Fractions are obtained by an analogous process of division, and small numbers can be obtained from larger ones by subtraction: II xv 9, p. 266; xvi 2, p. 272; xvii 1, 12, 18, pp. 276, 285, 290.

[17] II xvii 1, 7, pp. 276, 284; xviii 1, p. 294. Cf. Riehl, *Philosophischer Kriticismus*, 36, 44, 48, 50. Against the implied idealism of the text (in Riehl it is explicit), see *infra*, ch. v.

[18] II x 6, p. 197; xv 9, pp. 264, 266; xvii 22, p. 293; xviii 6, p. 296; xxi 75, p. 373; xxiii 33, 34, pp. 418, 420; III vi 11, p. 67; *Ex Malebr.* sec. 43, p. 444.

[19] II xiv 1, 10, pp. 238, 243; xv 9, pp. 264, 266-67.

an idea of reflection. It comes into the mind in the simplest act of reflecting on the succession of our thoughts, whether such succession follows logical laws, or is dependent on psychological associations or on the succession of sense-perceivables in the physical world. But days, years, ages, etc., do not come into our minds in this simple way. They are derived from the revolution of the earth in relation to the sun, and would so far seem to be ideas of sensation, rather than ideas of reflection. How are we to understand their relation to the simple idea, the psychological duration-unit?

Locke's position may perhaps be stated briefly as follows:—There is (1) duration in itself, or absolute duration, a constant and uniform temporal progression, strictly continuous and indivisible.[20] There is (2) what we may call our psychological duration-sense, which furnishes us with a kind of working scale for measuring that portion of absolute duration which coincides with our individual experience. This duration-sense is in effect an apprehension of the different ideas which succeed one another in our minds. That is to say, we measure any brief duration-period by reference to the number of ideas which we can observe to succeed one another in that period. Locke assumes that variation in the rate of succession of our ideas is so slight as to be negligible, so that this succession-rate furnishes a fair index to the rate of absolute duration. The unit of this psychological scale is the "moment" mentioned above.[21]

So far, all is clear enough: but complications ensue. This duration-scale can be applied directly only to a narrow extent. It can serve as a measure of successions in the physical world only so far as the physical rate of change is comparable to the psychological rate of succession of ideas. Physical motions which are very rapid or very slow are, as we should say nowadays, beyond the upper or lower *limen* of the duration-sense. Consequently, in dealing with physical changes, we use an objective, instead of a subjective, test of duration. We make use of certain periodical changes among physical phenomena as the objective standard or measure of time progression. *Any* constant periodical appearance, if universally observable, would serve to distinguish time-intervals, but in practice we have come to use, as a type of such phenomena, the "diurnal and annual revolutions of the sun," so that minutes, hours, days, years, etc., represent portions of time measured out by the motion of the heavenly bodies, or in modern times (*c.* 1670), by the more accurate motion of a pendulum.[22]

Such motions, however, conduce to the measurement of duration only so far as they constantly bring about the return of certain sensible ideas

[20] II xiv 1, 21, 23, pp. 238, 249, 251; xv 11, p. 267; cf. xv 9 note (dictated to Coste), pp. 264-65.
[21] II xiv, esp. 3, 4, 9, 12, 15, 21, pp. 239-49.
[22] II xiv 10, 11, 19, 21, pp. 243-44, 247, 249-50.

in seeming equidistant periods. In other words, it is the equidistant period, and not the motion as such, which is important; and if we ask how we know that the motions of the heavenly bodies or of the pendulum *are* equidistant, we are ultimately thrown back on our psychological time-sense, especially in judging the smaller intervals, which are more nearly comparable to its "moments." Thus we see that it is as corresponding to various groups or collections of duration-units, that hours, days, etc., can be used as measures of time.[23] It is from this view-point that they are regarded as simple modes of the duration-unit: they are the kind of mode known as "collective," formed, like the numbers, by the processes of abstracting, enlarging, and naming.

What are we to say of time, and of finite and infinite duration or eternity? In what sense are these considered as simple modes of the duration-unit? Time for Locke is that portion of absolute duration which enters into our human experience, and is articulated and rendered suitable for human uses by the various objective measures of duration, employed as "landmarks," for denoting the position in duration of finite real beings, in respect to one another. That is, it is a complex system of relations, in which events can be dated with reference to one another. As a complex idea of this kind, it involves the indefinite enlarging of the simple duration-unit so as to fill out the whole sphere of human history and human experience, and may in this sense be regarded as a collective mode of the simple idea.[24] The concept of finite duration is given along with any and every group of "moments," but eternity or infinite duration, though acquired as an idea by a process of enlarging the duration-scale without ceasing, stands on a slightly different basis from the others. It is no mere collective mode, for no amount of repeating finite moments could give us infinity, but we conceive it by reflecting on the endless capacity for enlarging our ideas which we have. It arises from reflection on the progressive enlargement of the scale and is thus concerned primarily with the progression-side of the process, and only in a secondary sense with the content of the scale enlarged, in this case, its duration-quality. It is thus not certain how far infinite duration is to be considered strictly as a mode of the simple idea of *duration*.[25]

In summary, we may say that Locke's view of duration contains three fundamental conceptions:—(1) absolute duration, (2) the subjective measure of duration, of which the simple idea is the "moment," and (3) time, or duration articulated and systematised for human uses by reference to physically objective measures. These objective measures are dependent for their duration-value ultimately upon our duration-sense and

[23] II xiv 21-22, pp. 249-50.
[24] II xiv 17, p. 246; 31, p. 256; xv 5, 8, pp. 261, 263; xxvi 3-4, pp. 436-37; cf. Fraser's note 1:263. n. 2.
[25] II xvi 8, p. 274; xvii 2, p. 277.

its unit, the moment. Hours, days, years, time, etc., are collective modes of this simple idea, while finite and infinite duration are only with difficulty regarded as modes of duration at all.

3. Simple Modes of Expansion

What is the simple idea in the third group? Is it expansion, extension, space? As in the two previous groups, Locke at times writes as though this were the case. Space is said to be a simple idea, one of the most modified of simple ideas, and extension is mentioned as one of the primary and original ideas on which all others depend.[26] But here, too, it is clear that space or expansion is not itself the simple idea in question. It could not, e.g., be repeated and added together in order to give us the idea of a furlong or a mile. Hence we see that the simple idea must be some relatively small portion of space, and further examination shows that this is indeed the case. Locke insists that the mind makes use of small measures of expansion, such as inches or feet, etc., as simple ideas, in building up the more complex ideas of spatial length. He further points out that the "ordinary smallest measure we have" of expansion is looked upon like the unit in the case of number. From this it would seem that the simple idea of expansion was an inch or something of the kind. But it is pointed out further that the simple idea is without a name: it is the least particle of matter or space we can discern. Locke suggests as a name, "sensible point," and clearly means, as Fraser interprets in his notes, what we should call *minimum sensibile*, the least portion of space of which we have a clear idea of sensation.[27]

In what sense are inches, feet, furlongs, miles, etc., modes of this "sensible point"? The simple idea is here an idea of sensation, and as the modes in this group appear to be also ideas of sensation, it seems fairly easy to regard them all as collective modes, due to repetition and enlarging of the sensible point. However, Locke's treatment of expansion is in effect not quite so simple, but is strictly parallel to his treatment of duration. His position is thus as follows:—There is (1) absolute expansion,[28] (2) our expansion-sense, with its unit, the sensible point, (3) place, or that portion of expansion which enters into our experience and is articulated and systematised by reference to objective measures, such as the human foot or the diameter of the earth. These objective measures again derive their value as measures of expansion, ultimately from our expansion-sense, and

[26] II v p. 158; viii 9, p. 170; x 6, p. 197; xiii 2, p. 219; xv 9, pp. 264-66; xvii 22, p. 293; xxi 75, p. 373; xxiii 3, p. 394; xxxii 18, p. 522.

[27] II xiii 27, p. 236; xv 9, pp. 266, 267; xvi 3, p. 271; cf. *Jour.* 1677, King 2:176-77. It is "the least particle of matter or space we can discern: ordinarily about a minute, and seldom less than thirty seconds, of a circle, whereof the eye is the centre."

[28] II iv 4, p. 155; xiii 10, p. 224; xv 2, 5, 8, 9, pp. 258, 261, 263, 266; xvii 4, p. 279.

represent collections of "points." All lines, angles, circles, etc., as well as feet, yards, and similar "objective" or physical measures of space are thus ultimately regarded as collective modes of the simple idea or sensible point.[29]

The treatment of finite and infinite expansion or immensity is precisely parallel to the treatment of finite and infinite duration. It is doubtful how far they can be regarded legitimately as collective modes of the expansion-unit. They arise rather from contemplation of our power to enlarge our ideas of expansion without limit, and deal primarily with the enlargement-aspect, and only secondarily with the expansion-quality as such.[30]

4. Simple Modes of Motion

Locke's main purpose in dealing with simple modes is to show, in a number of important instances, that the content is derived from sensation or reflection, in the form of simple ideas, and that ideas somewhat remote from their "original" represent merely repetitions and enlargements of these simple ideas. This purpose he regards as already adequately fulfilled, and the other simple modes, including those in this fourth group, are dealt with only briefly, and "for method's sake." However, from the statement that modes of motion correspond to modes of extension, we may hazard the following hypothesis as to Locke's meaning:[31]

The simple idea in this group is not motion in the generally understood sense, though motion is certainly spoken of as a simple idea, a frequently modified simple idea, and one of the primary and original ideas, in a sense similar to what we have found to be intended in the preceding groups. If we are to be governed at all by the analogy suggested by Locke himself, we should regard the simple idea of motion as an unnamed unit acquired by a kinaesthetic sense, the smallest portion of motion of which we have a clear idea of sensation. This psychological motion-unit would be the simple idea modified in all the instances in this fourth group.[32]

If we allowed ourselves to be guided yet further by the suggested analogy with extension, we should say that Locke's view of motion and its modes would contain the following three elements: (1) the idea of absolute motion, a pure continuum, (2) the kinaesthetic motion-unit, (3) the complex system of motions which fall within human experience, and are articulated and systematised by reference to objective measures of motion, taken from moving physical objects. Such objective measures would be:

[29] II xi 6, p. 205; xiii 4, 6, 7, pp. 220-22, 236; xv 2, p. 258.

[30] Cf. further II xvi 8, p. 274; xvii 2, 3, 7, pp. 277, 278, 281.

[31] II xviii 1, 2, p. 294.

[32] II v, p. 158; viii 9, p. 170; x 6, p. 197; xxi 75, p. 373; xviii 6, p. 296; xxii 10, p. 387; xxiii 3, p. 394; III xi 11, pp. 66-67.

sliding, rolling, walking, running, creeping, etc., and the motion-element in these ideas would be seen, in the last analysis, to depend for its value on our kinaesthetic sense, and to correspond to collections or groups of the kinaesthetic units. From this view-point all the simple modes of this group would be collective modes of the simple idea.

5. Simple Modes of Power

It is by no means easy to discover precisely what Locke understands by power, and it is still more difficult to feel that its simple modes can be discovered and stated in detail. In Chapter XVIII of the second book, which deals professedly with simple modes, we can infer from sections 6 and 7:

1. that the simple idea of power comes to our minds by sensation and reflection (passive power by sensation, and active power by reflection);[33]

2. that when the mind has this simple idea of power, it can variously repeat and compound it, and so make new complex ideas or modes;

3. that the simple idea of power has been modified to a great variety of such complex ideas, with names belonging to them;

4. that the reason for this great variety of modifications of an idea such as power, is because men frame modes in matters of great and frequent concernment, such as human actions, and supply them with special names for purposes of rapid communication.

From these two sections in the chapter on "simple modes," one might be tempted to conclude that the simple idea of active power had for its simple modes the various human actions, which could perhaps be regarded as various combinations of an elementary sense of activity. Unfortunately for this hypothesis, we are definitely told later, in the chapter which deals officially with "mixed" modes, that while the idea of power is one of the most modified, and deals with the great business of mankind, viz., action, the various types of action form not simple, but mixed, modes. As instances we are given (1) consideration and assent (actions of the mind), (2) running and speaking (actions of the body), (3) revenge and murder (actions of both together). These instances are regarded as modes (1) of thinking and power combined, (2) of motion and power combined, (3) of thinking, motion, and power combined. It is for this reason that they are regarded as "mixed," i.e., as resulting from a combination of two or more simple ideas.[34] Thus the concrete suggestion of Chapter XVIII is seen to break down, and we are left without knowing in what direction to

[33] II xxi 2, 4, 5, 28, pp. 311-12, 313, 329-30.

[34] II xxii 10, p. 387.

look for the simple modes of power, though we know that they are many in number, and are supplied with names.

In this difficulty we might try to extend the line of reasoning already adopted and verified in the cases of duration and expansion, and which is doubtless applicable also to number. If we assume an analogy with the previous groups, we should construct hypothetically the following theory:

1. There is absolute power, the correlate of change as a whole, pure activity, the attribute of Deity.[35]

2. We have a psychological activity-sense, derived from volition-experiences of different degrees of intensity. The unit degree of intensity of felt activity would be the simple idea of power, an idea primarily of reflection, expressing the smallest degree of activity which could be clearly observed by introspection.[36]

3. From observation of the sphere of physical changes, so far as these come within human experience, we derive various physical or objective measures of power, such as horse-power, candle-power, volts, etc., and so far as absolute power enters into human experience, we regard it as an organisable system, measured in terms of energy-units such as ampères, volts, horse-power, etc. Each of these objective measures ultimately derives its value as a measure of power from its correspondence to a group or collection of our felt psychological activity-units, and would consequently be regarded as a collective mode of the simple idea of power.

The above tentative hypothesis is not completely verifiable by reference to Locke's writings. Such terms as "horse-power," "ampères," etc., are nowhere found, and the inferences from Chapter XVIII, which to some extent provide a justification for the theory suggested, occur in a chapter which professedly deals with the subject only briefly and "for method's sake." For the general view indicated, however, the subsequent chapters of this study will provide some general justification, by showing the consistency of the above hypothesis with Locke's general view-point. In detail, however, it should be regarded as definitely an unverified hypothesis, inserted here only for the sake of method.

6. Simple Modes of Thinking

Thinking, for Locke, consists psychologically in our having a continued "train" or sequence of ideas in our minds. Each part of this thought-process "perishes the moment it begins," and in consequence, any two thoughts, as successive parts of the same stream, are not identical, but

[35] II xxi 2, p. 309; xxiii 28, p. 414; III vi 11, p. 66; IV iii 27, p. 219; cf. Crous, *Die Grundlagen der religionsphilosophischen Lehren Lockes*, pp. 29, 35-37.

[36] II xxi 5, 28, pp. 313, 329-30; xxiii 18, 30, pp. 407, 416; cf. Fraser 1:311. n. 6.

must at least have different "beginnings of existence."[37] This sequence of ideas, which we may perhaps symbolise in the form a-b-c-d . . . n, may take place "passively," as when our minds apprehend, without much active selection, sense-impressions in the precise order in which they affect the sense-organs, this order being governed by sequences in the external world. Locke recognises a second kind of passivity in the association of ideas, viz., when habitual sequences are formed on the basis of chance or custom, without logical relevance. He suggests tentatively a physiological explanation of this phenomenon, which would reduce it, in effect, to the first kind of passivity mentioned above.[38] In such cases, where the connection between the elements of the thought-stream is the product of chance and non-rational factors, i.e., where there is no active (rational) choice and direction of our ideas, Locke is inclined to regard the experience as the lowest degree of what can be called reason, and as very little removed from having no conscious thought at all.[39]

So far we have been considering merely the passive power of thinking. There is always in our waking life a train of ideas succeeding one another in our minds, and attention to this sequence is the essence of thinking, whether the sequence is caused from without or is self-directed from within. But there are various degrees of such attention, and these are not all "passive." In passive thinking, we attend merely to the thought-process as it happens; but in active thinking, we can bring into view at our choice ideas which are out of sight, and can thus compare a past with a present idea. We can consider and contemplate any idea, by turning it on all sides, marking its relations and circumstances, and inhibiting irrelevant thoughts. In a word, the mind can direct the course of the stream of thought, picking out for especial consideration any elements whatever, and arranging them at will.[40]

Thinking, then, is attention to the sequence of ideas. What is the simple idea of thinking, of which the instances in this group are regarded as simple modifications? We are told that thinking is one of the primary and original ideas, one of the primary qualities of spirit;[41] but as Locke frequently regards it as covering the whole field of consciousness, including e.g., willing[42] and feeling,[43] it is clear that the simple idea is narrower

[37] II vii 9, p. 164; xiv 3-4, 6, 9, 14-16, 37, pp. 239, 242, 243, 245, 252-53; xix 1, pp. 298-99; xxvii 3, p. 441; cf. *Conduct of U.* sec. 30, p. 83.

[38] II xxi 1, 74, pp. 308, 371; xxxiii 5-7, pp. 529-30.

[39] II xix 1, 3, 4, pp. 298-301; IV xvii 2, p. 388.

[40] In terms of our symbolisation suggested in the text, the sequence would be in the form a-a-a-a, or a-c-a-c-, or any other combination: cf. II xix 3, pp. 299-300; xxi 5, 74, pp. 313, 371; Works IV p. 59; *Conduct of U.* secs. 7, 30, pp. 45-46, 83; cf. Köhler, *op. cit.* 59.

[41] II xxi 75, p. 373; xxiii 30, p. 416; Works IV p. 21; *Nat. Phil.*, xii p. 495.

[42] II xix 2, p. 299; xxi 17, 74, pp. 322, 371; xxvii 11, p. 448; cf. *Educ. passim.*

[43] II xxiii 30, p. 417; III i 5, p. 5.

than this. In Chapter IX of the second book we are told that the first and simplest idea we have from reflection is what some call thinking in general. Locke himself prefers to call it "perception," and understands by it what we should nowadays call simple apprehension, primarily, apprehension of ideas in our minds.[44] In fact, just as the simple idea of duration is the time of apprehending one idea in our minds as it passes in *sequence*, so here, the simple idea of thinking would seem to be the smallest amount of the apprehension-process of which we have a clear idea of reflection, i.e., the apprehension of one *idea*. In duration, the emphasis is on the sequence, in thinking, it is on the idea.[45]

"Perception," then, considered as the apprehension of one element of the thought-stream, is the simple idea of thinking. In what sense are remembrance, discerning, reasoning, judging, knowledge, faith, etc., to be regarded as simple modifications of this apprehension-unit? It is clear from the nature of the case, that no merely mechanical addition of apprehension-units can give us "knowledge" or "faith," in the sense in which one plus one plus one gives us "three." In what sense, then, is this "modification" to be understood? Locke's position appears to be twofold. A number of the simple modes of thinking are explicitly considered as "degrees" of thinking, i.e., as names for the different degrees of intensity or active power with which we attend to the thought-sequence. Sensation, for instance, is the almost purely passive reception of ideas from external sense-impressions. Reverie and dreaming are almost as passive: in these states the ideas float along with a minimum of choice and direction. Contemplation, intention, or study, on the other hand, are states in which we exert a considerable degree of active thinking-power.[46] Locke also seems to recognise as "degrees" of thinking a further series, which varies, not from the pole of passive reception to the pole of active selection, but from obscurity to clear and distinct perception. To some extent these two view-points coincide, but the distinction is not clearly worked out. From this combined view-point, the following can all be considered as simple modes of thinking: sensation, imagination, reverie, dreaming, ecstasy, intention, contemplation, apprehending, comprehending, etc., knowing, believing, adhering, preferring, etc., doubting, etc., fearing, hoping, etc., to the end of the list. These are all instances of apprehension of an idea either between the poles of obscurity (hardly apprehending at all) and clear and distinct knowledge, or between the poles of passive reception and active selection, exemplified in the case of reverie or dreaming as opposed to study.

The remaining instances can perhaps be understood by reference to the stream of ideas. Remembrance, for instance, is the perception of a past

[44] II ix 1, p. 183; cf. vi 1, p. 159; xxi 5, p. 314.

[45] II xv 9, p. 266; xxiii 4, p. 420; IV i p. 169; vii 4, 9, 10, pp. 269, 271, 273, 274, Works IV p. 221. *Educ.* sec. 167.

[46] II xix 3, pp. 299-300, etc.

perception, and occurs with one of the elements (say b) repeated in the stream of thought a-b-c-d-*b*-f-*b*. Remembrance thus seems to refer to a combination of a present perception with a past perception-unit, and would in this way be a collective mode. Recollection also appears to be much the same as remembrance, but contains also the idea of a greater intensity-degree of "seeking," and is thus partly a collective mode, partly a degree-modification of the simple idea. We might similarly say that contemplation could be interpreted as repetition of an apprehension-unit with an identical content (b-b-b-b), and could thus be regarded as a collective mode. But this would take us rather beyond the expressed view of Locke, who treats it definitely as a "degree." The possible dual basis of explanation, however, indicates—as indeed Locke himself confesses—that the position with regard to the simple modes of this idea has not been completely worked out.[47]

If we wish to sum up tentatively Locke's view of thinking and its simple modes, we should say that it contains the following three fundamental conceptions:

1. the idea of absolute or infinitely perfect thought, attributable to the Deity;[48]

2. the simple apprehension-unit, our human subjective measure of thinking;

3. the sphere of human experience in general, and in particular the system of scientific knowledge, which, from the point of view of reflection, is organised with reference to the degrees of probability and of demonstrative and intuitive knowledge, of which degrees the simple modes, sensation, imagination, reasoning, faith, etc., considered above, are instances. These simple modes are ultimately degrees or perhaps in a few instances collective modifications of the simple apprehension-unit which Locke calls "perception."[49]

7. Simple Modes of Pleasure and Pain

The simple ideas of pleasure and pain can not be described or understood apart from the simple experiences in which they are given. As the "simple" ideas of such experiences, Locke probably understands the least amounts or degrees of such experiences, of which we have clear ideas of sensation and reflection.[50] Satisfaction, delight . . . misery, etc., are

[47] II xix 1, 2, pp. 298-99; Köhler (*op. cit.* 67) regards contemplation as a stopping of the stream; but this seems contradictory to Locke's way of regarding the stream; cf. II xiv 9, p. 243.

[48] II xxiii 33-36, pp. 418-22; III vi 3, 11, pp. 57-58, 66-67; x 9, p. 199; cf. *Ex. Malebr.* secs. 43, 53; *Govt.* II xvi, p. 176; King 1:228; II p. 71; Fox Bourne 1:225; cf. Crous, *op. cit.* 19, 23, 29-30.

[49] IV xxi 5, p. 462; cf. Fraser 2:462. n. 6. The whole *Essay* is a concrete example and proof of this point.

[50] II vii 10, p. 164; xx 1, p. 302.

recognised as simple modes in the sense of degrees of intensity of pleasure and pain.[51] The "passions" and "more simple modes" dealt with in Chapter XX are all dependent on degrees of pleasure and pain arising under various conditions in our experience. They are not strictly modes of pleasure and pain, but depend on, and can not be understood without reference to, degree-modifications of pleasure and pain. For a similar reason good and evil, a consideration of which often causes pleasure and pain, though they are not exactly modes (for a cause is not a mode), are yet, as being so intimately bound up with pleasure-pain experiences, considered briefly in this chapter.[52]

In brief summary, then, we can say that Locke's view contains the following fundamental conceptions:

1. the idea of absolute pleasure or infinite happiness, attributable to the Deity;[53]

2. our pleasure and pain sense, which furnishes us with the simple idea of pleasure and pain;

3. our affective life as a whole, so far as this is considered by reference to the various passions, which correspond to various modes of pleasure-pain in the sense of degrees.

8. Simple Modes of Matter

On the hypothesis of molecular physics, to which Locke inclines, though without entire acceptance, the simple idea in this group is the least particle of matter, of which we can have a clear idea; it is not exactly an idea of sensation, but should rather be regarded as an idea of a kind of microscopic sensation.[54] This simple idea is the atom. Solidity, bulk, texture or cohesion of parts, are regarded as simple collective modes of this idea; figure, extension, and motion also seem to Locke to depend on a number of corporeal particles, in order to retain any significance for man.[55] The secondary qualities are regarded officially as various combinations of texture, motion, etc., i.e., ultimately also as collective modes of the atom.[56]

In analogy with the preceding cases, we might point out that Locke's view contains the following three fundamental conceptions:

[51] II vii 2, p. 161.

[52] II xx 2, 3, 5, pp. 302-04. Martinak (*op. cit.* 10) omits the degrees of pleasure-pain of ch. vii and the "more simple modes" of ch. xx, and adds to his list of passions also envy and anger. But envy and anger are "mixed" modes, as containing a sense of value for the person envied, and some consideration of revenge, respectively, as well as pleasure and pain (see xx 14, p. 306).

[53] II xxiii 33, p. 418; III vi p. 66.

[54] II xxiii 12, p. 403; IV x 14 ff., pp. 317 ff.

[55] II viii 24, p. 180; IV vi 14, p. 264; cf. *Jour.* 1676, King 2:123.

[56] II viii *passim*; xxiii 7, pp. 397-98; IV xiv 12, p. 380; *Nat. Phil.* xi p. 494.

1. the idea of pure matter, or the "real constitution of things," understood by the Deity alone;[57]

2. our notion of the atom, human and hypothetical;

3. physical science, or the systematisation of human knowledge in terms of modifications of the atom-concept. So far as the atom-concept is hypothetical, a simple idea of a supposed microscopic sensation rather than a simple idea of actual sensation, by so much must our physical science built upon such a basis fall short of e.g., mathematical knowledge, which is based on the clear and distinct apprehension of a simple idea which is actual.[58]

It is doubtful how far the above group can be compared strictly with the other seven groups. It deals with "qualities" rather than with "ideas."[59] From the point of view of ideas, Locke emphatically regards primary and secondary ideas, not as modes, but as simple ideas. It is *degrees* of sweetness, degrees of light, shades of color, etc., i.e., degrees of the *ideas* of the secondary qualities, which are considered as simple modes. In this sense they are rightly so considered. Words, tunes, etc., are perhaps to be regarded as collective modes of a simple idea of sound.

So far we have examined each of the eight groups of simple modes in order to discover within each group in what sense the instances given are to be understood as modifications of their respective simple ideas. It remains to put together the results of these separate enquiries, in order to realise the general meaning which the conception of simple mode has for Locke.

In groups 1, 2, 3, 8, and perhaps also 4, 5, and to a slight extent 6, the basis on which the mind constructs the simple modes appears to be similar: the instances are collective modes, consisting of groups of unit-elements added together in a definitely quantitative manner. Locke is himself well aware of this, and does not hesitate to point out that our modal knowledge in these various groups deals properly only with the mathematical aspect of the ideas in question.[60]

In groups 5, 6, and 7, the basis is not exactly quantitative. The difference between the various modes in each group is not precisely a matter of more or less in terms of quantitative units, but rather of qualitative units,—more or less in terms of qualitative degree. It is a matter of greater or less approximation to clear and distinct thinking, of greater and less degrees of pleasure and pain, etc.[61]

In both cases there is a common element, which we have expressed by means of the terms "more" and "less." Our general conclusion, then,

[57] III vi *passim*; IV vi 14-16, pp. 264-66; Fraser, notes 1, 3 2:62, n. 1, 97.

[58] Cf. e.g., *Educ.* sec. 190, pp. 182 ff; Fraser 2:140. n.

[59] II viii 7, p. 168.

[60] II xiv 30, p. 255; xvi 8, p. 274; xvii 1, 9, 10, pp. 276, 283; xxiii 24, p. 420; xxix 14, p. 493; cf. *Jour.* 1676 King 2:123.

[61] II xvi 3, pp. 270-71; xvii 6, p. 280; xviii 6, p. 295.

would appear to be:—*A simple mode is* (*quantitatively or qualitatively*) *more or less than a simple idea of sensation or reflection. It arises by means of a mental construction in three stages: abstracting, enlarging* (*or subtracting*), *naming.* In other words, it is an expanded or diminished idea of sensation or reflection.[62]

This, then, appears to be the meaning of the conception of simple mode as Locke understands it. But as this view seems to imply a definitely relativistic standpoint with regard to modal knowledge, it remains to deal with the chief difficulties inherent in such a standpoint. These are:—(1) the simple idea, (2) relations, so far as modes are distinguished from them, (3) the concept of substance. The next three chapters will be devoted to a discussion of these three difficulties. We should then be in a position to answer the first part of our problem, viz., to state the meaning of the conception, before advancing to the second part, in which the epistemological function of simple modes is to be examined.

[62] *Cf.* IV xii 7, 15, pp. 347, 355-56.

CHAPTER II

SIMPLE MODES AND SIMPLE IDEAS

At the close of the last chapter we found ourselves compelled, in view of the relativistic theory of knowledge implied in our conclusions, to inquire in what sense any ideas could be "simple."[1] There is, however, a further, and perhaps more immediately pressing, reason for the present investigation. As a matter of fact, Locke treats many of the terms, which we have, on his authority, already considered to be simple modes, i.e., complex ideas,—also at times as simple ideas. This fact challenges explanation, and as any answer to the first question would have to account for this difficulty also, we shall proceed inductively, beginning with a consideration of the ambiguous instances in question. The following is a complete list of terms undoubtedly referred to in this double sense:

1. One, number.
2. Duration, second, minute, hour, day, year.
3. Extension, inch, foot, cubit, parasang, figure, place, space.
4. Motion.
5. Power.
6. Remembering, perceiving, judging, discerning, reasoning, knowledge, believing, willing, doubting.
7. Satisfaction, uneasiness.
8. Solidity, bulk, texture, or cohesion of parts, motion, rest.

1. Simple Ideas of Number

The first group has already been dealt with to some extent in the preceding chapter, where it was simply stated that unity or one is a simple idea arising by abstraction from simple sense-experiences of unity. It remains to ask a little more definitely (a) how we obtain this simple idea, (b) what it is when we have obtained it, and (c) in what sense it is "simple." We shall then be in a position to compare it with "one" considered as a mode, if it *is* so considered by Locke.

No idea is suggested to the mind by more ways than that of unity or one. It is suggested to the understanding by every object without and every idea within. Whatever we can consider as one thing, whether a real (physical) being or an idea, suggests to the understanding the idea of unity. In other words, we receive the idea of unity or one both from observation and from introspection; i.e., we receive the idea passively,

[1] Cf. H. G. Townsend, *The principle of individuality in the philosophy of Thomas Hill Green*, ch. ii. *passim*.

without altering it in any way; it is *given* to us. Precisely *how* it is given to us we can not explain, beyond affirming that it is suggested to us by *every* occasion of perception, external or internal.[2]

From this it appears that we consider every object whatever as "one"; and for the latter-day student the question at once arises, how this unity is to be understood. Is it something belonging to the object-in-itself, which we merely apprehend passively, or does it belong to the object only in relation to our perception of it, i.e., so far as it is an object-for-a-subject? In the second case, unity would presumably be something in the nature of the percipient subject, "suggested" to the mind on the occasion of perception, a "category" with which the mind reacts to the stimulus of the perceivable.[3]

In many cases there is no doubt whatever that the unity in question is introduced by the mind into certain mental phenomena, as indeed into certain physical phenomena. In all cases of construction, e.g., cases of a synthesis of elements in accordance with some plan, it is the mind which introduces the unity, though the elements must of course be themselves combinable, i.e., in the present case, logically consistent. Thus all mixed modes are undeniably cases of arbitrary mental construction, and the unity which the mode possesses is given by the mind and fixed by the process of naming, as in the cases of "triumph," "procession," "ostracism," etc. The same is true of the unity of simple modes, of relations, of nominal essences, in a word, of all complex ideas whatever.[4] Even in the case of certain simple ideas the same appears to be true. Consider, e.g., the "unit" in duration and extension, dealt with in the last chapter. In themselves, duration and extension are strictly continua, and as such do not admit of units, etc., which are discontinuous. In such cases the so-called unit is only a quasi-unit, and is recognised by Locke to be of a man-made kind, the smallest portion of these continua of which we have a clear idea of sensation or reflection. From his recognition of the fact that such "units" in duration are only approximately equal, and his vacillation on the question as to what precisely the unit in extension is, we can readily see that there is something relative and only approximately unitary about these conceptions.[5] Finally, Locke himself admits that there is no universal agreement as to precisely what amounts in the various groups dealt with in the last chapter are to be taken as unitary, so that we infer that in all these cases the "unity" is man-made, arbitrary, approximate, introduced by the mind into phenomena for human conveniences in living here below.

We are not, however, to conclude from this to an idealistic interpretation of Locke's standpoint. The question as to the part played in

[2] II i 2, p. 122; vii 7, p. 163; xvi 1, p. 270; IV xi 2, p. 326; *Ex. Malebr.* secs. 9, 10, 15, 16, 18.

[3] Cf. Fraser's notes 1:145, 163, 270. On the interpretation of "suggested," see Appendix, *infra*.

[4] II ii 2, p. 145; xxii 2, p. 382; III v, 9-15, pp. 49-53; vi *passim*.

[5] For references, see preceding chapter.

our conception of unity by the transcendental unity of self-consciousness is not raised by him. As the last paragraph to some extent indicates, unity for Locke means primarily numerical unity. Every idea whatever is numerically one, but the numerical unit itself is one in the strictest sense. In other cases, it is the mind which introduces numerical unity into its constructions, so far as may be; but in the case of the number-series, 1, 2, 3, 4 . . . , the discrete unit in its strictest sense is already a part of the series, and with this view-point Locke remains "uncritically" satisfied.[6]

So much for what Locke understands by "one." It remains to ask in what sense the arithmetical unit is "simple." In view of the statement that it has "no shadow of variety or composition in it," the usual method of interpretation is to regard it, like other simple ideas, which are all "uncompounded," as "an unanalysable phenomenon."[7] This may be quite correct, but if we take the Lockian terms in the Lockian sense, we can go a little further than this. In saying that simple ideas in general are "uncompounded," and that unity is without "variety or composition," he means that we do not perform the mental function of "composition." In dealing with the numerical series, e.g., 1, 2, 3, 4, 5, 6, 7 . . . , if we wish to apprehend 7, we have to add up: 1, 1 plus 1 (2), 2 plus 1 (3), 3 plus 1 (4) . . . 6 plus 1 (7). In other words, seven is obtained by a process of composition, or adding one to one, one to two, etc. But "one" is itself the *first* number, and no process of composition is necessary to apprehend one, as it is if we wish to apprehend two, three, etc. The simple idea in this group is thus the *first element apprehended* in order to build up the composite numbers: it is the smallest portion of the series which we can apprehend clearly and distinctly. The "simplicity" of the arithmetical unit thus depends on its relation to our apprehension.

If "one" is the first and simplest idea, the number obtained without composition, and if the modes are all expanded or diminished *ones*, i.e., are all obtained by composition, it looks as though we must have been mistaken in placing "1" also among the modes of the simple idea of number in the preceding chapter. In what conceivable sense could *one* possibly be considered as a modification of the unmodified unit? Is not this a "contradiction"? It is true that in the third section of the chapter which deals officially with the simple modes of number—a section entitled "each mode distinct"—the language used implies that 2, 1, 200, are all alike "combinations," i.e., simple modes; but might we not, one could urge, here be facing one of the typically Lockian "inexactitudes of expression?" In view of the first section of the chapter could not one emend the expres-

[6] For the idealistic interpretation, and Locke's own view as contrasted with it, see *infra*, ch. v.

[7] II ii 1, p. 145; xvi 1, p. 270; cf. Fraser 1:145. n.

sion in some way, so as to understand 2 and 200 alone as combinations or modes, the 1 being treated as after all only the uncompounded simple idea? The case is perhaps not so desperate. In the fifth section, which deals with the generation of the number-series, we find that not only addition, but also subtraction, can be employed. Thus, three minus one gives us two, which is a mode: two minus one gives us one—is this also a mode? It is at any rate not the "uncompounded" unit, for we have apprehended it as a result of subtraction, and as so apprehended it would seem to have a right to the name, "simple mode of number."[8]

Thus we see that the difference between simple idea and simple mode in this group is based on the relation of our apprehension to the number-series. In itself, arithmetical quantity constitutes an infinite progressive series, from infinite smallness at one extreme to infinite largeness at the other. In the abstract, *any* point could be taken as a starting-point, and any increment of addition or subtraction could be employed as a base for constructing all the other numbers, which would then be modes of the first. But in the case of human beings, our point of contact with quantitative reality, i.e., the smallest portion of arithmetical quantity of which we have a clear and distinct idea, happens to be "one"; and, as our unit of apprehension, "one" is our simple idea, and any number obtained by means of composition or subtraction from this apprehension-unit is a simple mode of it.[9]

"Number" has already been dealt with in the preceding chapter. Locke uses it in the sense of the number-series, which is not a simple idea, but can be regarded in two ways, each of which is complex. (a) It is sometimes regarded as the number-series in an absolute sense, progressing to infinity in the direction of largeness or in the direction of smallness; this is not a simple idea, but (like "infinity") is too large for our understanding to grasp; it belongs to the "vast ocean of being" in which our thoughts lose themselves. (b) It is also at times treated as the human number-series, i.e., the system of numbers used in the mathematical evaluation of our human experience, a mere fragment of the absolute series; in this sense Locke regards it as constituted of units, in the process of composition, and in this sense it is definitely a collective mode of the simple idea of number. There are, it is true, times when the term is used as though it was simple, but as we have already seen, this is only in a loose sense, in which it is intended for the "unit." Taken strictly, then, "number" is not really a simple idea at all, but is either a collective mode, or else the absolute number-series.[10]

[8] II xvi 1, 3, 5; pp. 270, 272; cf. xvii 1, p. 276.

[9] II xvii 10, 12, pp. 283, 285.

[10] References given in preceding chapter. For Locke's "absolute" view, in which reality is itself mathematical, see further, ch. v, *infra*.

primary idea, but as the mere termination of extension, or even of color, and in the chapter on the simple modes of space he describes minutely its generation from lines and angles enclosing a space. From this point of view it is pronounced officially to be a complex idea, more particularly a simple mode of space or extension. The various figures (triangles, circles, etc.) are all regarded, as a rule, as simple modes, not of figure, but of space. Consequently, it is only loosely that figure is referred to as a simple idea. Strictly regarded, it is to be taken as a mode, as a collective mode of the simple idea of space, the "sensible point."[19]

Place is uniformly regarded by Locke as a simple mode. But in one passage "situation" is included in the list of primary qualities, and the ideas of primary qualities are usually treated as "simple." It has been urged that "situation" is identical in meaning with "place," and that consequently, what Locke usually states explicitly to be a mode, which is a complex idea, he here regards as a definitely simple idea; in other words, we are faced by a typical "contradiction."[20] The case is perhaps not so desperate as this thesis would maintain; at least, if we compare the list of primary qualities given in this passage with the slightly differing lists given elsewhere,[21] it would appear to be used to take the place of the term "extension." We shall accordingly regard "place," not as a simple idea, but as a simple mode of space.

In summary we may say that in this group the relation between simple idea and simple mode is based on the relation of our apprehension to absolute space. Absolute space is strictly a continuum, infinitely extended in every dimension.[22] In the abstract, any starting-point whatever, and *any* measure of expansion might theoretically be taken as an increment with which to construct simple modes. In the concrete, we, as human beings, take the smallest portion of infinite space of which we have a clear idea of sensation, the sensible point. This represents the point of contact of the human mind with absolute space, and when expanded in the one direction gives us the various geometrical figures, lines, angles, circles, etc., and when expanded as a sort of scale, the units of which represent sensible points, serves to evaluate in expansion-terms physical objects frequently met with in our experience, such as the human foot, or the various divisions of the diameter of the earth; these we can then use as derivative

[19] II xiii 5-6, pp. 221-22; xxi 75, p. 373 (omits "figures" in a list of primary ideas); cf. Fraser 1:158. n., who points out that figure is definable, and therefore not simple, but complex.

[20] II viii 23, p. 178; cf. Manly, *op. cit.* 58, 59.

[21] II viii 22, p. 178; viii 9, 169-70, etc.

[22] II xvii 10-11, pp. 283-84. Ollion (*op. cit.* 227-33) explains the difficulty in terms of Riehl's distinction between *Begriff* and *Vorstellung*. The *Begriff* of space is complex, the *Vorstellung* of space is simple. Ollion applies this same distinction in the other cases considered in this chapter.

measures (relatively simple ideas) in dealing with external sense-phenomena. The modes in this group thus derive their value for us from the fact that they are composite expansions or diminutions of the simple idea, by means of which we come into definite contact with space as it is "in itself."

4. Simple Ideas of Motion

Motion is consistently referred to as a simple idea of sensation, obtained through more than one sense, as the idea of one of the primary and original qualities of bodies, as modified into many complex ideas, and as one of the simple ideas which go to make up our concept of a substance, and, when expanded to infinity, our idea of God.[23] In these passages it is almost invariably associated with extension, duration, etc., which we have already seen to be, when taken in this general sense, not simple ideas at all, but either collective modes or absolutes presupposed by Locke. In the same way here, it can not consistently be maintained that "motion" in the general sense is other than complex. In a way, Locke admits this, for he always understands it as including active motion (motivity) and passive motion (mobility), which are *two* ideas, though he insists that the truest sense of motion is active motion. The strictly simple idea would seem to be some kinaesthetic sense-unit, derived from introspection. This would presumably represent our human point of contact with the relatively infinite possibilities of motion.[24] But as the subject is treated only briefly and for method's sake, we are not in a position to draw any more definite conclusions from this group, other than to recognise an apparent similarity to the results drawn definitely from the preceding groups.

5. Simple Ideas of Power

The idea of power is treated only obscurely by Locke. In the chapter devoted especially to a consideration of this idea, he appears to regard it as fundamentally the idea of active power, i.e., a productive activity which is the correlate of produced change. Active power in the general sense, is attributed (in an infinite degree) to the Deity,[25] and is no more a strictly simple idea, than are duration, expansion, and motion in the absolute sense. From the relatively vague hints in Locke's writings, we should expect the "simple" idea of active power to be the least degree of activity of which we, as spirits, have a clear idea of reflection; in other words, it would be derived introspectively from the sense of activity in

[23] II v, p. 158; viii 9, p. 170; x 6, p. 197; xviii 6, p. 296; xxii 10, p. 387; xxiii 3, p. 394; III vi 11, p. 67.
[24] II xxi 3, p. 310; III vi 11, p. 67.
[25] To the references from the preceding chapter, add here: Fraser, Introd. to Ed. of *Essay*, I pp. ci-ciii.

volition-experiences.[26] This would give us a human point of contact with the infinite possibilities of power in general, and expansions of the "uncompounded" idea would enable us to realise the powers in other spirits and in nature.[27]

6. Simple Ideas of Thinking

In the controversy with Stillingfleet, Locke refers twice to thinking as a "modification" of substance.[28] Are we to conclude that he sometimes regards thinking as a mode? It seems plain, from the nature of the case, that he can not possibly believe that a hypothetically simple idea of substance might be compounded in such a way that in one compound it would give us the mental construction known as solidity, and in another compound, the mental construction known as thinking. The passage can perhaps best be explained otherwise. It is in support of his contention that matter might conceivably be endowed with the power of thinking, that Locke treats solidity and thinking as "modifications." From the context it is plain that he is using the term somewhat loosely in the general sense of "attribute," and in the Stillingfleet controversy, as well as in the parallel passage in the *Essay*, solidity and thinking are, in fact, consistently treated as simple ideas, the correlative attributes of substance.

Remembering is at times referred to as one of the "operations of the mind," which in the second book are as a rule regarded as providing us with *simple* ideas of reflection.[29] At other times, however, it is very definitely stated to be a simple *mode* of the simple idea of thinking, with a suggestion that it is a "collective" mode of this perception-unit.[30] Fraser seems to consider it to be a simple idea,[31] and yet, from the account in Chapter XIX of the second book, it can hardly be regarded as without "composition." Considering how indefinite Locke is in the passages referred to for support of the simple-idea theory, and how very definite in the passages which support the view that it is a simple mode, it seems best to

[26] II vi p. 159; xxxiii 18, 30, pp. 407-8, 416. In the last passage the two "primary qualities of spirit," which elsewhere are usually referred to as thinking and *willing*, are said to be thinking and a *power of action*, i.e., active power. Further references are given at the end of the next group, under the term "willing."

[27] Manly, *op. cit.* 53, makes the strange mistake of regarding the idea of power as a "mode" in this chapter, and criticises Locke for so treating it. He appears to think from II xxi 1, p. 308, that it is fundamentally a "mixed" mode, if not a "relation," and believes this chapter to be in direct contradiction to statements elsewhere to the effect that "power" is a simple idea. The truth is, that Locke is dealing in ch. xxi with the idea of power in general, and does not clearly indicate what the simple idea is. I have not been able to discover with certainty what its simple modes are: Martinak, *op. cit.* 10, suggests active and passive power, and liberty: Fraser 1:299. n., suggests volition.

[28] Works IV p. 33.

[29] II i 4, 23, 24, pp. 123, 141-42; vi 1, p. 159; perhaps also x 2, p. 294; xi 14, p. 211.

[30] II i 20, p. 139; vi 1, p. 159; xix 1, p. 298. Cf. also the similar treatment of "memory," I iii, pp. 109-11; memory is the passive correlate of the active function of remembering (II x 7, pp. 197-98).

[31] Fraser 2:42. n. 2.

recognise the fact that at times Locke tends to regard the various operations of the mind as furnishing us with clear simple ideas—he is definite about this, though not very definite as to whether "remembrance" is one of these—while at other times he tends to reduce all the operations of the mind to the fundamental one of "perception" or simple apprehension, treating sensation, remembrance, etc., as modifications of this one fundamental idea.[32]

That "perceiving" is a simple idea, in fact *the* simple idea of thinking, our investigation in the previous chapter has already sufficiently established.[33] In what sense, then, could perceiving be itself considered as a simple mode? There is one passage in the second book, in which perceiving is referred to, along with choosing, as a mode of thinking. Thinking seems here to be used in its most general sense, as equivalent to consciousness,[34] and perceiving appears to mean a definite degree of thinking, i.e., a degree of thinking which is definitely apprehending, as opposed to a less definite degree of consciousness, in which choosing, perceiving, etc., are not yet sufficiently clear to be distinctly apprehended. This passage, however, presents us with an isolated case: and in general, Locke's view undoubtedly is, that perceiving is not a mode in the sense of a degree of thinking, but that it is the simple idea of which the various modes of thinking are degrees or compounds.

"Judging" appears to be regarded by Fraser as a simple idea, doubtless on the ground that it is an operation of the mind observable in introspection.[35] But whenever Locke mentions it definitely, he refers to it in ways which indicate that for him it is a *mode* of thinking. Thus, in the chapter entitled "of the modes of thinking," it is referred to officially as an "operation of the mind and *mode of thinking*,"[36] and from the official account of it in the fourth book,[37] it appears to be distinctly complex: for in it we apprehend the probable agreement or disagreement of two ideas mediately, i.e., by the intervention of others; and this would seem to give us a mode of perception which is partly a degree, in that it falls short of perfect knowledge, and partly a collective mode (as involving the apprehension of many ideas, each of which apprehensions would presumably be a simple idea). We shall therefore regard "judging," not as a simple idea, but as a simple mode of the simple idea of thinking.

"Reasoning" is referred to as a simple idea of reflection, on the ground that it is an operation of the mind about its simple ideas received through

[32] Cf. II xxi 75, p. 373.

[33] II i 4, p. 123; ch. ix, esp. p. 192; xi 14, p. 211; xxviii 14, p. 481; Works IV p. 21; Fraser 1:192. n.

[34] II xxi 17, p. 322, and Fraser's note *ad loc.*

[35] Fraser 2:42. n. For further references see *supra*, note 29.

[36] II xix 2, p. 299; cf. II vi 1, p. 159.

[37] IV xiv 4, p. 362; xvii 17, p. 409; cf. *Misc. Papers*, King 2:106.

sensation, an operation which, when reflected upon, i.e., in introspection, furnishes us with a simple idea.[38] On the other hand, precisely as in the case of "judging," it is definitely referred to, in the chapter on the modes of thinking, as a *mode*,[39] and the description of reasoning in the fourth book appears to indicate its complexity beyond the possibility of doubt.[40] As compared with the simple idea of thinking, i.e., the apprehension of one idea in our minds, reasoning, as being the apprehension of a *series of ideas* in their logical connections, would seem to be a collective mode; for it certainly includes a complexity of "intuitions."

"Knowing" is similarly referred to as a simple idea of reflection, on the ground that it is one of the operations of the mind analogous to judging and reasoning, etc.[41] However, there is reason to believe that Locke at times uses it as identical in signification with thinking or perceiving, i.e., in a somewhat loose sense.[42] Elsewhere it is officially included among the simple modes of thinking,[39] and the account of knowledge in the fourth book as "perception of the agreement or disagreement of ideas," as compared with the simple idea of thinking (mere apprehension of an idea or its meaning), is at once seen to be complex.[43] In fact, it seems to be a simple mode of the simple idea, either when considered as a "degree" higher than probability,[44] or as a collective mode of perception.[45]

"Believing" is taken by Fraser to be a simple idea, presumably of an operation of the mind apprehended in introspection.[46] But Locke refers definitely to "faith" as a mode,[47] and in the account of belief which we find in the fourth book, it is very plainly a complex process, at least as complex as knowledge, from which indeed it differs only inasmuch as the connections of elements are not apprehended intuitively, but are matters of probable presumption.[48] It thus appears to be a mode, i.e., a *degree* of probability less than full knowledge, and perhaps also, in view of its complexity, a collective mode of the simple idea of thinking.

Though one might be tempted to infer from Chapter I of the second book that "doubting" was taken by Locke to be a simple idea of an operation of the mind revealed in introspection,[46] yet it is mentioned too definitely as a mode of thinking for us to be in doubt as to Locke's real intention.[47] It appears to be understood as a simple mode, in the sense of a

[38] II i 4, 23, 24, pp. 123, 141; xi 14, p. 211; Works IV p. 21.

[39] II xix 2, p. 299; cf. vi 2, p. 159, and i 20, p. 139.

[40] IV xvii 3, 15, pp. 388, 408.

[41] II i 4, p. 123; xxiii 15, 32-34, pp. 406, 417, 418, 420; III vi 11, pp. 66-67; Works IV 21, *Ex. Malebr.* sec. 43, p. 444.

[42] II xxi 5, p. 314 (with Fraser's note *ad loc.*); xxiii 32, pp. 417-18; III vi 11, p. 67.

[43] IV i 1, p. 167; Fraser 2:168, n.

[44] Cf. *Nat. Phil.* xii, p. 495.

[45] II xxiii 34, p. 420.

[46] II i 4, p. 123.

[47] II xxiii 30, p. 417; cf. IV xvi 9, p. 377.

degree of assent or probability, something less than certainty, though it is also perhaps complex, in the sense in which a proposition, which contains two ideas, is more complex than a simple apprehension of one idea, and may thus be also regarded as a collective mode of the simple idea of thinking.

"Discerning" appears to be referred to as one of the operations which the mind may reflect on and observe in itself, and would thus seem to be a simple idea;[48] but in the only passage in which Locke speaks decisively, it is definitely stated to be a mode of thinking,[49] and as the account of it in Chapter XI seems definitely to regard it as complex (for it presupposes at least *two* simple apprehensions, in order that one can be distinguished from the other), it would thus appear to be a collective mode of the simple idea of thinking.

"Willing" naturally gives rise to doubts. In the preceding chapter we regarded it as a simple mode of thinking, in accordance with the official declaration in the chapter on the modes of thinking, that volition, equally with reasoning, judging, and knowledge, is such a mode.[50] Furthermore, the account of volition as the power of the mind to determine its thought to the producing . . . of any action, or an act of the mind knowingly exerting that dominion,[51] seems to indicate that the cognitive elements ascribed to it are certainly more complex than the simple apprehension of an idea, and accordingly it appears to be a collective mode of the simple idea of thinking. However, there are undoubtedly many passages in which Locke regards willing, not as complex, but definitely as a simple idea of reflection, analogous to thinking.[52] We have ourselves suggested, in accordance with indications in Locke's work, that some simple volition-experience is the simple idea of active power, and it is clear that Locke tends to identify willing and active power. Consequently, unless we are prepared to regard power, with its modes, as all modes of thinking, it looks as though we ought to regard willing, in the sense of some simple introspective experience of active power, as a simple idea, rather than as a simple mode of thinking. On the other hand, the reasons adduced in the first part of this paragraph are similar to grounds which, in other cases, have decided us to treat the terms in question as modes rather than as simple ideas. The only conclusion which can be at all just to all the evidence is to say that Locke uses "volition" or "willing" in rather a loose sense, and understands by it in effect two elementary conceptions: on the one hand, it is definitely cognitive, and as containing a complexity of cognitive

[48] II i 4, p. 123; xi 2, 14, pp. 202, 211.

[49] II vi 2, p. 159; xi, 1, p. 202.

[50] II xix 2, p. 299; xxi 17, p. 322.

[51] II xxi 15, p. 320.

[52] II i 4, p. 123; vi 1, p. 159; xxi 30, p. 331; xxiii 15, 18, 30, 32, pp. 406, 407, 416, 417; xxviii 14, pp. 480-81; III vi 11, p. 67; cf. *Nat. Phil.* xii p. 495.

elements is regarded as a collective mode of the simple idea of thinking. On the other hand, in the sense of "motivity," or the active power which can initiate changes of motion, whether among thoughts or in the world of physical objects, it appears to be distinguished from the simple idea of thinking, and perhaps contains, in some elementary activity-sense, a "simple" idea of active power or willing. More than this we can not say: and even to say this is to introduce a sharper analysis into the problem than is done by Locke himself.[53]

In summary, we might say that in this group the relation of simple idea to simple mode is somewhat similar to the relation discovered in the preceding groups. However, Locke's aversion to "speculation" prevents him from working out clearly what he understands by perfect thought, the thought attributed to the Deity. It appears to include the whole content of possible thinking, and to be intuitive rather than discursive.[54] More than this we are not told: we are not therefore in a position to draw clear and definite conclusions. But we may suggest hypothetically that perfect thought seems to be like our thought, expanded in content, and perhaps also in clearness and distinctness, to infinity, and that consequently the simple idea of thinking constitutes our human point of contact with the divine thought, and that the various modes of thinking (with some reservations on the subject of "willing") are all human expansions or contractions of this contact-unit which is simple apprehension, either collectively or as a matter of degree of clearness, etc.

7. Simple Ideas of Pleasure and Pain

Satisfaction and uneasiness are referred to both as simple ideas and as modes.[55] The ground for their "simplicity" is that they are apprehended in reflection. The ground for their being considered as modes is that they are complex forms of pleasure and pain. Locke deals with the whole matter of pleasure and pain somewhat briefly. We can, however, extract the following conclusions from his treatment:—Pleasure and pain are used in a somewhat general sense, as class-names which include satisfaction, etc.,—though "uneasiness" is sometimes identified with "pain." What the strictly simple idea of pleasure and pain may be, is not stated. But satisfaction, uneasiness, and the other affective terms in Chapter VII of the second book seem to be used for the various degrees of these simple ideas which have been recognised in language. It is probably only in a loose

[53] Willing and thought are used synonymously or in conjunction in the following passages: II xxi 4, p. 313; xxiii 18, 22, 28, pp. 407-8, 409, 413; cf. Köhler, *op. cit.* 19, 56, 58. Köhler compares Descartes, *Principia Philos.* 1:9, for a similar usage.

[54] II xxiii 34, p. 420; IV xvii 14, p. 407; cf. *Jour.* 1677, and *Study*, King 1:161-62, 171; cf. also Crous, *op. cit.* 29-30, 33.

[55] II i 4, p. 123; vii 1, p. 160.

sense that Locke refers to the simple ideas under the names of satisfaction and uneasiness respectively; and we shall therefore regard them as degree-modifications of an (unnamed) simple idea of pleasure and of pain, respectively. This unnamed unit probably represents the human point of contact with the infinite possibilities of happiness realised in divine experience.[56]

8. Simple Ideas of Matter

The eighth group hardly requires discussion in this place. For it is only as "qualities" of matter that solidity, bulk, etc., are regarded as complex, or as modes of the atom.[57] Considered as "ideas," they are consistently referred to as simple. Consequently there is not even an apparent contradiction, such as we have met with in the preceding groups. But the ideas of secondary qualities belong to this group, and in view of the difficulties which these have occasioned to interpreters, it is perhaps worth while to consider the relation of simple idea to simple mode in the sphere of color, as an example of this portion of the group.

As a matter of direct sensory experience, Locke regards the possibilities of color, which, considered in the abstract, may be taken to be infinite,[58] as being grouped, for possessors of human sense-organs, around certain unitary experiences, white, red, yellow, etc. There is no simple idea of "color," of which W, R, and Y might be regarded as complex modifications. The simple experiences *are* W, R, Y, and "color" is a general term which refers, not to their aspect as experienced contents, but only to the way in which they are experienced.[59] The modes of these elementary color-experiences are accordingly of two kinds. On the one hand, we have shades or degrees of intensity, saturation, etc., of the same elementary color-experience, as pink and extreme scarlet[60] are modes of the simple R-experience. On the other hand we have such colors as orange or purple, which result from a combination of R-Y, and R-B, respectively. Of these two kinds of modes, the first are clearly "simple" modes, in the sense of degrees of the same simple idea, while the second kind, as involving a combination of more than one simple idea, might seem to be "mixed" modes. Locke, however, includes them in the class of simple modes, presumably because they belong to the same general class of color. A definitely "mixed" mode would then be, e.g., any example of *audition colorée*.

Manly[61] objects to the first class, on the ground that "shades of the same color" is a self-contradictory expression. "One simple color," he

[56] In addition to the references given in the preceding chapter, cf. also *Essay*, II xxi 42, p. 340.

[57] Cf. Fraser, Ed. of *Essay*, introd. I p. xcvii.

[58] Cf. *Commonplace Book*, 1671, King 1:10-11.

[59] III iv 16, pp. 41-42.

[60] Scarlet itself is a simple idea: *Nat. Phil.* xii p. 495.

[61] *Op. cit.* 51.

urges, "can only be itself." He would consequently reduce all shades of color to the second class, of quasi-mixed modes. This indicates a serious misapprehension of Locke's view-point. For Manly, the spectrum contains a continuous color-series, in which Y is on the one side passing over into orange, and on the other into green; consequently for him the spectrum contains as elements R, Y, G, B, etc., and in between these an infinite number of gradations of R-Y, Y-G, G-B, etc. For Locke, on the other hand, the simple Y-experience is not the yellow of completest saturation, but admits of degrees of yellow, before passing over into orange or greenish-yellow. In other words, Manly is considering, not our ideas, but the spectrum, and his point of view is physical: whereas Locke's view-point is primarily psychological; he does consider the spectrum as well as our ideas, but he keeps the physical and the psychological enquiries sharply distinct. His position is thus clear and consistent. The simple idea represents our human elementary experience, the human point of contact with the infinite possibilities of color-experiences. The infinite possibilities are due to the spectrum: the simple idea is due to the kind of sense-organs we possess. It admits of degree-modifications which are definitely simple for introspection, i.e. are degrees of one and the same simple idea, as well as degree-modifications like purple, which are slightly more "mixed," but still come within the color-genus.

So far we have considered separately and in detail the various groups of instances in which the relation of simple idea to simple mode has been stated ambiguously by Locke. We may now attempt to put together the results drawn from the various groups, and state a general conclusion concerning this relation. For Locke the simple idea represents a human point of contact with what, in itself, is regarded as an absolute and infinite series.[62] This simple idea in duration, in extension, in thinking, etc., gives us something definite as a basis on which to construct a science which will be of use for the guidance of human life.[63] The simple modes represent constructions, multiples, or factors of the simple idea, either in quantity or in degree, and the difference between simple idea and simple mode, considered from the standpoint of the abstract series in duration or extension, etc., can only be expressed by saying that the simple idea is an apprehension which is without composition, a human point of contact with the infinite series, while the simple mode is always a multiple of this, attained by a process of compounding the simple idea.

[62] *Essay*, Intro. sec. 5, p. 29; II xxxii 15, p. 520; cf. *Study*, and *Misc. Papers*, King 1:197 98, 228; cf. Fraser 2:102. n., and von Benoit, *op. cit.* 15.

[63] II xvii 9, pp. 405-6; IV xi 8, pp. 322-23.

CHAPTER III

SIMPLE MODES AND IDEAS OF RELATION

In view of the relativistic view of knowledge suggested by the conclusions of our first, and confirmed by our second, chapter, it has become advisable to inquire what Locke understands by ideas of relation. This inquiry becomes yet more pressing when we observe that certain of the terms hitherto regarded as simple modes—are also explicitly treated by Locke as ideas of relation. As this appears inconsistent with his general division of complex ideas into modes, substances, and relations,[1] we shall proceed inductively, beginning with a consideration of the ambiguous instances in question, and considering in detail how we are to understand this apparent contradiction. The following is a complete list of terms undoubtedly referred to in both senses:

1. Numerical relations—all ideas of number.
2. Temporal relations—all ideas of duration; time.
3. Spatial relations—all ideas of extension; figure; place.
4. Motion-relations.
5. Power-relations.
6. Thought-relations.
7. Pleasure and pain relations.
8. Matter-relations—primary qualities; secondary qualities.

1. Numerical Relations

In regard to the first group, we are told that all our ideas of number contain in them a secret relation of the parts.[2] This applies, e.g., to ideas such as five, a hundred, a million, etc., i.e., to all numbers generated by the process of compounding simple units so as to produce a new unity which is complex. The elements within such a complex have a definite relation to one another. For instance, in the number five, which consists of five "ones," each of these units bears to the whole number the relation of one fifth, and stands to the sum of the remaining units in the proportional relation of 1:4. On the other hand, in such a number as one hundred, each of the hundred constituent units, while in itself the same as any unit in the complex group called five, stands to its whole in the relation, not of one fifth, but of one hundredth, and to the sum of its fellow-units in the relation, not of 1:4, but of 1:99. In calling this a "secret" relation of the parts, Locke apparently means that we do not ordinarily take notice of

[1] II xii 3, p. 215; cf. Manly, *op. cit.* 46, 50, 53.

[2] II xxi 3, p. 310.

be, in the first case 1:19, and in the second case 1:1199. From a point of view, then, in which such relations would become explicit, ideas such as minute, hour, day, etc., would be termed "relative."

"Time" is also definitely treated by Locke as a relative idea, even in the chapters which are dealing with ideas of duration officially as simple modes. The point of view from which it is an idea of relation regards it as a determinate, distinguishable portion of infinite duration, i.e., as a system of time-distances reckoned from certain known human points of contact with absolute duration: These constitute landmarks in the boundless ocean of eternity, and enable us to answer by reference to them all questions of "when?," "how long?," etc. Temporal ideas are thus seen to be all "relative."[6]

In our earlier chapters, however, we have considered all these ideas to be simple modes of the simple idea, i.e., as expansions or multiples of the elementary duration-unit. No emphasis whatever has been laid upon a possible relation of the "parts" of such ideas: attention has been focused solely upon the building up of such complexes by repeating and adding, i.e., by "enlarging" the simple idea. It is clear, then, that we have to do with two different view-points. The modal view-point is genetic, and deals with the human formation of complex ideas on the basis of a human point of contact with the infinite series of the knowable. It is concerned with the human understanding, and may be termed psychological. The relational view-point has nothing to do with genesis, or with the distinction of simple and complex ideas. Relational thought moves solely in the sphere of the intelligible, the objective knowable, which in the present case is an absolute duration-series within which certain relations can be discovered. This point of view is not psychological, but rigidly logical.

3. Spatial Relations

As with duration, so with extension. All ideas of extension contain in them a secret relation of the parts. That is to say, a relation between the "parts" of an inch, a yard, a mile, etc., which has hitherto remained implicit, would, if a certain view-point were adopted, become explicit. Hitherto the ideas of inch, yard, etc., have been treated as simple modes of the sensible point, the unit in expansion: but from the new standpoint we should realise that they are all ideas of relation.

Amongst these relative ideas of extension, two stand out as especially clear cases of relativity: the idea of figure, and the idea of place. Figure is described, in the chapter on the simple modes of space, as nothing but the relation which the parts of the termination of extension, or circumscribed space, have amongst themselves; and place, in the same chapter,

[6] Cf. e.g., II xiv 17-18, pp. 246-47; xv 5-8, pp. 261-64; xxvi 3-4, pp. 436-37.

as indeed elsewhere also, is described as a system of distance-relations, organised around certain human points of contact with absolute space. These points of contact serve as landmarks, to denote the position of finite real beings, in respect to one another, in the uniform infinite ocean of space.[7] From this we see that figure and place, as well as all other ideas of extension, are "relative."

Hitherto, however, we have consistently treated these ideas as simple modes of the sensible point; and, in fact, it is sufficiently clear that they can legitimately be regarded as expansions of this simple idea. If then they are definitely treated by Locke as "relative," his standpoint must be different, and we must here also have two points of view. In the modal view, the genesis of the complex ideas from the simple idea is prominent. This is a human action, on the basis of a human point of contact with absolute space. As concerned, therefore, primarily with the human understanding, such a view-point may fairly be termed psychological. The relational view, on the other hand, is not primarily concerned with genesis, or indeed with the human standpoint, at all. It deals essentially with the objective knowable,—in the present case with absolute space—and must be regarded as purely logical.

4. Motion-Relations

Motion is mentioned by Locke as an idea which clearly has something relative in it. If we turn to a later chapter, we find that he regards motion as a continuum, the parts of which come into being successively, in such a way that there is a relation of diversity between all the "parts" of any motion which can be considered as complex.[8] In this way a complex idea of motion, such as we find in the modes, sliding, walking, running, etc., would be treated as an idea of relation, the relativity being constituted by the diversity of the successive "parts" of the motion. Here too, then, we have two view-points:—(1) the modal, the nature of which has been sufficiently indicated, in the present as well as in preceding chapters; and (2) the relational, which contains no reference to the genesis of the complex idea "sliding" etc., from repetitions of the simple motion-idea. Motion is here taken in the absolute sense, as an infinite continuum, and is considered apart from human understanding and psychology. The view-point is here objective or logical, in the sense already explained.

5. Power-Relations

The idea of power is stated definitely to include in it some kind of relation—a relation to action or change—and "powers" in substances are

[7] II xiii 7-10, pp. 222-24; xv 5-8, pp. 261-64; xxi 3, p. 310; xxvi 3, 5, pp. 436, 437-38. In the *Journal* (King 2:176-82) space is itself considered as a complex of relations.

[8] II xxi 3, pp. 310, 311; xxvii 3, p. 441.

declared to be only relations to other substances.[9] In view of the obscurity which appears to attach to Locke's treatment of this idea, we have not been able to discover its simple modes. But in the passages with which we have at present to do, it is sufficiently plain that ideas of power are regarded as correlative to changes or actions, in much the same way as that in which cause and effect are correlative ideas.[10] For our present purpose it is enough to point out that the view-point here is other than the modal view elaborated in preceding chapters. The standpoint here is "objective," and the view-point from which ideas of power are considered to be "relative," is not psychological, but logical.

6. Thought-Relations

Thought, like motion, consists in a continuous train of succession. Consequently, between the different "parts" of this train, relations of diversity are discoverable, and all complex thoughts can thus be regarded as "relative." For instance, in a train of thought symbolised by *a-b-c-a-f*, not only are the contents of the ideas for the most part different, but also, since *a* "perishes the moment it begins," i.e., as *b* comes into being and takes its place in consciousness, the second *a* differs from the first *a* at least in having a "different beginning of existence." Hence in any complex idea-sequence, as in the case of modes such as remembering, reasoning, etc., there are always relations of diversity between the constituent elements of the thought-sequence, and such modes can be regarded as ideas of relation.[11] Furthermore, when we reflect, such ideas as thinking, reasoning, fearing, etc., are always considered, not as self-subsistent, but as relative to the idea of a "supporting" mind, or spirit-substance. We apprehend the "necessary connection" of such ideas as perceiving, thinking, reasoning, knowing, etc., with inherence or being supported. Inherence, however, is a "relative idea" superadded to thinking in a man, and the idea of thinking on the one side, and the idea of a "support" on the other, are plainly correlatives.[12]

Are we to infer that the above statements are inconsistent with the view previously maintained, viz., that such modes as reasoning, knowing, etc., are qualitative or quantitative enlargings of the simple apprehension-unit? It seems more cautious to conclude that we are dealing here also with two different, but not necessarily inconsistent, view-points. On the one hand we have the genetic, psychological, aspect, from which rea-

[9] II xxi 3, 19, pp. 310, 323; xxiii 35, 37, pp. 420-21, 422-23; xxxi 8, p. 510. There appears also to be a relation of coexistence between the different "powers" in a substance: see, e.g., II xxiii 6, pp. 396-97.

[10] Cf. Fraser 1:308. n.

[11] II xxiii 35, pp. 420-21; xxvii 3, p. 441.

[12] II xxiii 5, p. 395; cf. Works IV p. 21.

soning, thinking, etc., have been treated as simple modes. On the other we have the objective, logical, aspect, from which they are here regarded as relative.

7. Pleasure and Pain Relations

The simple modes of the pleasure-pain group are nowhere referred to explicitly as ideas of relations. But in two definite ways it is implied that they also can be considered as relative. In the first place, like other complex ideas, they would necessarily contain in them a "secret relation" of the parts, such as we have already considered in the cases of number, duration, and expansion. There is, however, a difference, in that the above groups are quantitative enlargements of their respective simple ideas, whereas the pleasure-pain modes are qualitative. But in any case there is room here also for proportional relations.[13] In the second place, as ideas of sensation and reflection, they are not self-subsistent, but, like the ideas of thinking dealt with in the preceding paragraphs, are relative to the idea of a spirit-substance, in which they are thought to "inhere." So that here also we are able to distinguish from the genetic, modal view already considered, a relational view which is not psychological, but logical.

8. Matter-Relations

Under the heading "simple modifications of matter" we have included all primary and secondary qualities. Are these considered as also relative? Figure and motion we have already found to be relative; but what are we to say of bulk, texture, and the other primary qualities? In the second book of the *Essay* it is stated that bulk, figure, texture, and motion of the parts (*sci.* of a substance), all include some kind of relation in them. From the context it is to be presumed that a relation between the "parts," i.e., atoms which compose these qualities, is intended; so that bulk, texture, etc., are relative in a sense similar to that considered above in dealing with the groups of numerical, temporal, and spatial relations. In the fourth book we find that primary qualities in substances are related (1) to one another in the same substance, by way of coexistence, (2) to motions, etc., occurring in other substances, and (3) to the secondary qualities which their "hidden constitution" in the substance tends to produce in percipient subjects. Similarly, secondary qualities are relative (1) to relations of bulk, figure, motion, etc., in the physical substance, (2) to similar relations in surrounding physical objects, with which their particular substance of

[13] II xxviii 1, p. 471.

inherence stands *in commercio*, and (3) to the constitution of the sense-organs in a sense-percipient subject.[14]

Here again we find ourselves forced to distinguish in Locke's thought two different view-points, whether we are dealing with "qualities" in the strict sense, or with "ideas" of such qualities. In the former case, as we have seen in the preceding chapters, texture and color, etc., can be regarded as physical complexes of physical atoms; the point of view is physical, and deals with the genetic relation between simple atoms and the complex qualities which they build up. From the strictly relational view-point it is ultimately the physical relations between the atoms which constitute complex groups to which attention is drawn. In both cases the view-point is physical, and deals with physical relations between atoms, so far as these enter into complexes; but in the modal view, it is the genetic relation between simple atom and complex quality, which is emphasised; whereas the specifically relational view-point is logical rather than genetic, and draws attention especially to relations of coexistence between the atoms which constitute the complex. Finally, in the first case, the complex is considered as a whole, whereas in the second it is a mere aggregate.

So far we have been considering primary qualities in the strict sense, in which they are taken as "qualities" rather than as "ideas"; and so far as we confine ourselves to this atomic view-point, the distinction between genetic and "logical" aspects may appear somewhat subtle. But if we attend to the truly modal view-point, from which the secondary *ideas* are considered as simple modes of the simple ideas of color, sound, etc., here we notice at once the sharp distinction between human and physical, psychological and logical, which we have already discovered in the preceding groups. The truly modal view-point, then, here as elsewhere, is psychological. The relational is physical, or, in the sense above indicated, logical.

In summing up the results obtained from our study of the separate groups, we can state (1) that in every group Locke has treated certain ideas sometimes as simple modes, and sometimes as relative, without any apparent consciousness of inconsistency; (2) that a further examination has disclosed two main view-points, which may very well be consistent, (a) the modal, and (b) the relational. Both deal with relations—as indeed does all knowledge; but the modal view is concerned with the relation between simple and complex ideas, whereas the specifically relational view deals mainly with the relations between the elements which together constitute complexes.[15] In the modal view, the complexes are regarded as wholes, as unities bound together by the name which symbolises them; in

[14] II iv 4, p. 154; viii 19, pp. 175-76; xxi 3, pp. 310-11; IV vi 7-12, 14, pp. 255-63, 264-65, etc. Cf. Fraser 2:261. n.; Tongeren, *op. cit.* 13-15, 19, 26-29, 32, 38-49, 52-53, 57-58, 64.

[15] Cf. also II xxv 6, p. 429.

the relational view, the complexes are treated as aggregates. Finally, as we have seen throughout, the modal view is genetic, and is concerned with the human understanding, with its human points of contact with the absolute series; whereas the relational view is concerned only with the objective knowable. The modal view is psychological, the relational logical.

We may now, perhaps, compare with our results so obtained, the position taken generally in the literature. In the first place we may notice that Locke's treatment of the same ideas now as modes, now as relations, is usually considered to be a serious inconsistency. The basis for this judgment is usually the belief that the classification of complex ideas as modes, substances, and relations, is intended as a strictly logical division, in which the species are mutually exclusive.[16] This belief is not shared by Fraser, who regards the division as a "history of the gradual awakening of the individual mind to an ever imperfect interpretation of the reality first presented in sense"; but he too regards Locke's position as inconsistent.[17]

In connection with our second general conclusion, we may observe that, while the double view-point is generally recognised, it is not understood in the sense indicated above. The distinction between complexes viewed as wholes and complexes viewed as aggregates is not accepted,[18] the distinction between the genetic and analytic view-points is hardly recognised at all in the present case;[19] and it is usually held that the relational view is fundamental, while the modal is a mere species of this, being found where Locke's thought is not sufficiently profound to penetrate down to the relational view.

The difference thus apparent between what we have found in Locke on the one hand, and the views attributed to him in the literature on the other, suggests that the relativistic view current in the literature, and the view of ideas of relation really held by Locke, are not the same. Locke's view, for instance, is very specific, and deals only with very definite kinds of relations—e.g., relations between elements of an aggregate, between elements and the whole which they constitute, whether this whole is a material or spiritual substance, the inter-relations of substances, and finally, such general relations as cause and effect, equal, more, etc.,—these are typical of the relations actually dealt with by Locke. To attribute to him in any modern sense the relativistic view of knowledge is an anachronism:

[16] Cf. von Benoit, *op. cit.* 19, 24; Manly, *op. cit.* 46-47; Green, *op. cit.* 20, 21; Martinak, *op. cit.* 50; Ollion, *op. cit.* 200-1, note.

[17] Fraser 1:215, 216, 426 notes.

[18] For example von Benoit regards all complexes as wholes, and von Hertling regards them all as mechanically conjoined aggregates (von Hertling, *op. cit.* 9, 12).

[19] Unless the distinction between *Vorstellung* and *Begriff* is intended to convey this distinction. Ollion borrows the distinction of *Vorstellung* and *Begriff* from Riehl. Riehl does not think Locke makes the distinction: Ollion, on the contrary, believes that it is recognised by Locke.

and consequently, as far as the literature treats the relativistic view as fundamental, and the modal view as a half-understood species of this, the view expressed is that of von Benoit or Ollion, etc., but not of Locke.[20] From Locke's own standpoint, the results stated in the text may be perfectly consistent. From a genetic, psychological view-point, certain ideas are regarded as mental multiples of what, for the human understanding, are "simple" ideas. From an analytic, logical view-point, the same ideas are treated as points in an infinite, objective, absolute series, within which relations can be discovered between any one point and any other point.[21]

[20] *Cf.* von Benoit, *op. cit.* 22, 24; Ollion, *op. cit.* esp. 201. Fraser points out clearly that "Locke has in view *not* the relational constitution as such" etc., (1:426). From the view-point of the present discussion it is unnecessary to enter upon a detailed examination of the view of relativism put forward, with reference to Locke, by H. G. Hartmann, *Locke a constructive relativist*, New York, 1912; and *A new conception of relativity and Locke*, Cincinnati, Ohio, 1914.

[21] Cf. II xxv 5, 7, pp. 428-29; Fraser 1:425.

CHAPTER IV

MODES AND SUBSTANCES. THE MEANING OF MODES

It remains to consider the relation of simple modes to substances. But before this can be done at all adequately, it will be necessary to indicate briefly the relation of simple modes to complex modes: for in relation to substances, modes are taken without qualification, and in fact the majority of the modes discussed in this connection by Locke are "mixed" or complex modes. If we add to this the fact that certain terms (e.g., "running") are spoken of in the chapter on simple modes, as simple, and in the chapter on mixed modes, as mixed, and that in the literature considerable difficulty is experienced in attempting to regard as simple, modes which are, however, definitely so designated by Locke,[1] it will be realised that here is a problem which should, if possible, be solved before we proceed to inquire into the relation of modes to substances.

Let us first of all consider the ambiguous instances in Locke's work. The idea of running is said to be a simple mode of motion: that is, it is a multiple or complex form of the simple idea of motion, a kind of movement in which the simple idea is repeated in such a way as to constitute the complex idea of running-movement. So far as it is considered merely as a complex movement, it is regarded as a "simple" mode. But if we consider it as swift or slow, this introduces considerations of time and space, and thus our idea becomes "mixed," i.e., is constituted by complex considerations, not only of motion, but also of duration and extension. Similarly, if it is regarded as a mode of action, there is usually some reference, explicit or implicit, to the correlative idea of power, and "running" is again a mixed mode, formed by the complex admixture of the two simple ideas, (1) motion, (2) power, especially active power. In the same way, apparently, Locke would regard the idea of "speaking" as a simple mode, so far as we treat it merely as a series of complex motions, but as a mixed mode, so far as we regard it as an action, i.e., so far as the correlative idea of power also enters into the idea. "Consideration" and "assent" are also simple modes, so far as we treat them as complex forms of thinking alone, but as soon as they are regarded as actions of the mind, i.e., as soon as the correlative idea of power also enters in, the ideas in question constitute mixed modes.

So too with colors. So far as these are regarded merely as different shades or degrees of simple color-ideas, they are treated as simple modes;

[1] Names which may be regarded as either simple or mixed modes, according to Locke, are:—(1) modes of motion (slide, roll, run, walk, speak, etc.), as in II xviii 2, pp. 294-95; cf. also xxii 10, p. 387; (2) modes of thinking (consideration, assent, etc.), II xxii 10, p. 387; (3) modes of color, II xviii 4, p. 295. In the nature of the case, almost any terms might be so regarded.

but if considerations of shape also enter in (and it is seldom that this spatial factor can be entirely banished), then our ideas of scarlet, purple, etc., are mixed modes. For example, the idea of the rainbow is constituted, partly by reference to simple ideas of color, but partly also by reference to its bow-like shape, if not also to its position in the sky. Such an idea is readily seen to be "mixed," i.e., constituted by reference to more than one kind of simple idea.

Locke's thought is here not difficult to grasp. It has reference, not to the names, which can stand, as we see, either for simple or for mixed modes: but to the ideas themselves, i.e., to how we think the idea. If we think it in reference to one kind of simple idea only, we have a simple mode; but if we think it in reference to more than one kind of simple idea, we have a mixed mode.[2] This seems clear enough. But if we turn to the literature, we find that a number of considerations appear to reveal difficulties underlying this simple treatment. Thus, for instance, Manly follows Leibniz in regarding the idea of figure as a mixed mode, on the ground that it is compounded of (1) straight lines and (2) curved lines, which are two very different ideas. He similarly follows the same authority in regarding the modes of motion as mixed instead of as simple modes. He points out further that "tunes" include, not only sound, but also pitch, time, and rhythm, and states that "words" also are not exact repetitions of any one simple sound, and further are always associated with some meaning. Tunes and words therefore are regarded as constituting mixed modes. Shades of color, he further insists, are always mixtures of different colors, and our only knowledge of tastes and smells is also of different kinds, so that these, too, are mixed, not simple, modes. Similarly, certain modes of thinking, such as remembrance and contemplation, contain a time-reference, and other conceptions which are certainly not multiples of "thinking" in any strict sense; and "love, hatred, desire, joy," and other modes of pleasure-pain, are too complex to be regarded as simple modes.[3]

These criticisms show traces of a common misconception of the difference between simple and mixed modes. They seem to rest upon an erroneous conception of what constitutes a simple idea. For instance, the view which regards "figure" as a complex mode insists that straight lines and curved lines are different simple ideas. For Locke neither of them is a simple idea. Both are alike simple modes, constituted by repetition of the simple expansion-unit, and consequently "figure" is only a more complex form of that same unit, and, so far as it is thus a multiple of *one* simple idea, certainly answers to the definition of a simple mode. In the other cases insisted upon by Leibniz and Manly, it is simply a question as to

[2] II xxii 1, p. 381.

[3] Leibniz, *Nouv. Ess.* 240a, 245a, etc. Manly, *op. cit.* 46, 50-53.

what is thought in the idea; if, e.g., in a tune, attention is paid to the rhythm (as in drum-music), this would presumably be a matter of the repetitions which constitute the mode; so, too, considerations of pitch would not fall outside the idea of sound; but considerations of tempo would certainly introduce alien considerations. The case seems to be parallel to the case of "swift or slow" motions considered above. That is, if attention is paid also to tempo, the tune would be a mixed mode, just as it would also if we paid attention to its affective qualities; but if we consider it from the point of view of sound alone, without thinking of tempo-questions at all, it would legitimately enough be regarded as a simple mode. So too in the other cases. In fact, the criticisms only serve to indicate a difference between a view which is that of the critics but not of Locke, and the view which he does hold: viz., that so far as any mode is thought as a complex multiple of one idea, it constitutes a simple mode: and that so far as it is thought as a multiple of more than one idea, it constitutes a mode which is "mixed."

We can now turn to the question as to the relation between mode and substance. In the literature, for the most part, emphasis is laid, as indeed it is so largely by Locke himself, on their differences. Modes are adequate and true. Modal knowledge constitutes science, so far as this is possible for man, simple modes furnishing the filling out of mathematics, and mixed modes constituting the main concepts of ethical science. Substance, on the other hand, is always an inadequate idea. Truth and reality can not be predicated of it, and it is not susceptible of scientific treatment. It is, perhaps, a necessary idea of reason, which we are unable to do without; but it does not serve to increase our knowledge, and, in uncritical hands, is the source of a host of fallacies.[4]

If we consider this treatment, we see at once that it concerns the epistemological function, rather than the meaning, of the ideas of mode and of substance. It is in the part they play in the construction of science, i.e., in their epistemological value, that they differ. But if we deal with them from the standpoint of meaning, i.e., from the standpoint which considers structure rather than function, the relation between them is seen to be very different. In a general way, we can say at once that they are mediately correlatives. Modes are the modes of substances, i.e., complex forms of the simple ideas which constitute the "powers" of substances, while substances are the "supposed" elements which give to the simple ideas "support" and a *point d'appui* in the world of physical reality. So that it is ultimately with reference to reality considered as a system of substances *in commercio* that modal constructions, instead of hanging loose in the air, receive a local habitation and a name. Apart from such a

[4] Works IV 11, 21-22, etc. Cf. Tongers, *op. cit.* 42-49; R. Falckenberg, *Gesch. d. neueren Phil.* Leipzig. 1886. p. 128.

system, the simple ideas of which the modes are multiples, are mere abstractions, and consequently their multiples, the modes, which derive what contact they have with physical reality primarily through the mediation of the simple ideas, are also the merest abstractions. But so far as the simple ideas are treated strictly as the "powers" of substances, so far also the modal constructions based upon such "powers" receive a connection with the world of interacting substances. Thus we see that, from the view-point of structure rather than of function, substances are immediately correlative to simple ideas, and mediately correlative to the multiples of these, viz., to the modes, both simple and mixed.[5]

So much for the general view. It is possible, however, to apprehend somewhat more clearly the structural relation between modes and substances, if we consider the structure, not merely of modes, but also of substances. Substances, for Locke's nominalistic philosophy, consist fundamentally of (1) a nominal essence, and (2) the idea of a support, which refers ultimately to the system of substances *in commercio*. It is when we compare the modes, especially the mixed modes, with the nominal essence of substances, that we realise their structural affinity. A mixed mode is a collection of multiples of simple ideas of various kinds: the collection is made by the mind, though it *may* be observed in nature, and its unity is given by the mind and fixed by the name, as e.g., in the cases of triumphus and ostrakismos. A nominal essence is a collection of simple ideas (and also often of their multiples) of various kinds: the collection, here also, is made by the mind, though it *may* be observed in nature, and its unity is given by the mind and fixed by the name, as e.g., in the cases of gold and horse. In both cases the "unity given by the mind" means that the structure must exhibit logical consistency, and it is easy to see that mixed modes and nominal essences have thus a certain resemblance.[6] Fraser goes so far as to regard them, not merely as closely resembling, but as identical, and there is warrant even for this extreme view in Locke's own words. But a close comparison indicates certain differences. Thus, the mode is composed wholly of multiples, whereas the nominal essence may contain also simple, un-multiplied ideas, and thus may consist only partially, if at all, of multiples. From this would follow the further difference, that the correlation between nominal essence and "support" is more close and immediate, as a rule, than that between mode and support, which would always be mediated by the simple ideas multiplied in the mode. Other differences, as e.g., that, while both are constructed in accordance with ideals of consistency, the nominal essence has a more definite relation than the mode, to the actual world of physical existence—such differences

[5] II xii 4, p. 215; Works IV pp. 13, 17; cf. Fraser 1:425.

[6] II xxii 1, 5, 9, pp. 381, 383, 385; xxx 4, pp. 499-500; III v 4, 6, 7, 10, pp. 44, 46-47, 49-50.

belong, perhaps, rather to the function-side than to the structural aspect, with which alone, however, we have at present to deal. Summing up, then, the results of our investigation, we can say that simple modes closely resemble the nominal essences of substances, but that the structure of the mode is on the whole (1) more complex, and (2) less directly related to the "support"-idea found in substance, to which, however, it is mediately correlative.[7]

The Meaning of Simple Modes

Up to the present point in our inquiry, we have prepared and classified a complete list of the simple modes referred to by Locke, and have considered them with reference to simple ideas, to ideas of relation, to mixed modes, and to ideas of substances. We should now, perhaps, be in a position to sum up our conclusions as to the meaning, or structure, of simple modes, before passing on to consider their epistemological function in Locke's philosophy. With this object, it is possible, either to take as our starting-point the simple idea, and to deal with the question on its psychological side, i.e., as concerned with the human understanding, or on the other hand, to begin with the conception of a system of interacting substances, and maintain the objective, logical, view-point. We shall begin with the simple idea.

For Locke the simple idea represents a human point of contact with the objective knowable. This knowable is a vast ocean of being in which our thoughts might lose themselves, but the simple idea is finite, clear, determinate, and represents from its various aspects, the smallest portion of the knowable of which we have a clear and distinct idea. All knowledge which is to have value for human beings must have reference to the simple idea; all conceptions, however sublime and remote they may seem, must, if they are to possess human meaning, ultimately terminate in these simple ideas of sensation and reflection.

The simple mode possesses such a reference. It is a simple idea writ large, a multiple idea of sensation or reflection, a complex idea formed by compounding or enlarging a single simple idea, by repeating mentally the simple idea, and joining together into a new unity the mental repetitions. To such enlargement there is no limit in the nature of things. A simple mode may represent 1, 2, 3 . . . *n* repetitions of the simple idea of sensation. The only limitations to the process are, theoretically, the demands of logical consistency, and practically, the usefulness of such a complex construction for purposes of human inter-communication in life or in science. In all such processes of mental construction, the human

[7] II xxiii 37, p. 422; III v 13, p. 52; vi 28, pp. 78-79; Works IV pp. 13, 17, 21-22, 29, etc.; cf. von Hertling, *op. cit.* 35; cf. Fraser 1:422, n.

value is derived from the content or "material" of the conception: and this is given in the simple idea of sensation or reflection, of which the mode represents *n* repetitions.

So much for the "matter" of the simple mode. It is necessary to consider also its "form," i.e., the law which guides the repetitions and conjunctions, and gives to the new compound that unity which is marked by the name. Locke lays very little emphasis on this aspect of the simple mode; but what he does say indicates that the demands of logical consistency play an important part in such constructions. That is to say, the laws of identity and contradiction would have to be observed in repeating the same identical idea, and the totality would have to represent the sum of its parts. As to the unity, while Locke is far from anticipating Kant's doctrine of the Categories as laws of the "functions of unity in synthesis," it does seem that the new unity is introduced into the synthetic process of mode-formation by "the mind."[8] In other words, modes, as mental constructions, obey the laws of mental construction, i.e., the laws of logic.

Comparison with ideas of relation and ideas of substances emphasises the close relation between simple ideas and simple modes, and shows that (1) the view-point as regards modes is genetic rather than strictly analytic, (2) substances and modes are to be considered as mediately correlative, i.e., modal constructions do not hang in the air, but have, in human knowledge, an ultimate relation to a system of interacting substances, which for Locke appears to constitute the final view of the knowable.

If we now reverse our standpoint, it is possible to commence with the concept of substances, and retrace our steps. Reality for Locke consists, as we have seen, in the system of interacting substances. But in relation to human knowledge, each substance consists of (1) an element of "support" and (2) a correlative complex of "ideas." These ideas which constitute the complex nominal essence of the substance, are of two kinds:— (a) apprehension-units, i.e., apprehensibles which are clear and distinct, and are of so small extent that no process of mental composition goes into their apprehending, and (b) multiples of these apprehension-units, built up out of such units by the mental process of composition. The first kind are what Locke calls simple ideas: the second include what Locke terms modes, both simple and mixed. A simple mode is any multiple of any one simple idea: a mixed mode is any multiple of two or more different simple ideas. Simple modes may thus be met with in experience, viz., as constituent elements of nominal essences. But they may also be produced by purely mental construction without reference to actual experience of them in given substances, though always with reference to actual experience (in substances) of the simple ideas of which they are mental enlargements.

[8] II xvii 20, p. 291; cf. von Benoit, *op. cit.* 23, 30-31, 78.

The extent to which such simple ideas are enlarged depends always on considerations of practical convenience, for the purposes of intercommunication in actual life and in scientific research.[9]

A simple mode is thus, from the point of view of structure, a logically constructed multiple (or fraction) of experienced units which help to constitute the nominal essences of substances which, in their real essences, are supposed to be in a process of interaction.

[9] This is not to be understood in a too utilitarian sense. Locke also admits the aesthetic and play impulses: see II xviii 4, p. 295.

CHAPTER V

LOCKE'S THEORY OF KNOWLEDGE—THE FUNCTION OF SIMPLE MODES

All knowledge, according to Locke, consists in propositions. Propositions are the statement in words of an apprehended relation of agreement or disagreement between two ideas. Consequently, knowledge in general is a body of statements, each of which corresponds to an apprehended agreement or disagreement of ideas. General knowledge is constituted by apprehended agreements, etc., between general ideas, sensory knowledge by apprehended agreements between sensory ideas, and modal knowledge by apprehended agreements between ideas which are modes.[1] Thus mathematics presents us with a body of agreements apprehended in the case of points, lines, surfaces, numbers, and other simple modes of the same kind. Ethics similarly presents us with a body of conformities or agreements discovered between proposed actions on the one hand, and the eternal law of right and wrong, on the other.

If we now narrow our enquiry to the case of modal knowledge where the modes known are "simple," as in the case of mathematics, we at once notice that this knowledge has two opposite poles. On the one hand, it is a mental construction, a systematic edifice erected, in accordance with the laws of logic, on the basis of agreements apprehended between simple modes, i.e., between ideas which are themselves mental constructions, complex ideas. On the other hand, the ultimate basis in content is precisely the elements which constitute these complex ideas, i.e., is the given content of the simple idea, of which the simple mode is, as we have seen, a mental multiple. To which of these poles are we to ascribe the knowledge-value of modal knowledge? To the "form," to the laws of thought, in accordance with which the mind frames its various constructions,—or to the content, to the ultimate "material," which is given in the simple ideas?

Let us take an instance. A triangle, as Locke is perpetually pointing out, has its interior angles together equal to two right angles. On what does this truth depend? Does it depend on the mental construction, which out of "points" has gradually, by the processes of repetition and juxtaposition, built up lines and angles, and so formed the triangle, and similarly also the right angles? Is it a case, as Kant would say, of reason apprehending only what she has already, in accordance with her own laws, constructed, or herself placed in the figure? Or, on the other hand, are

[1] Cf. e.g., IV iv 12, p. 237. In what follows, we shall confine ourselves, for the sake of brevity and clearness, to ideas of sensation, rather than include ideas of reflection.

we to regard such a figure as a triangle as, after all, only a sense-perceivable "point" writ large, multiplied, indeed, by the mind, but still retaining its sense-perceivable character, its given character peculiar to every point in the triangle, a given content distinct from the given contents of all other sensible ideas? Are we to regard the truth of the proposition as depending less on the rational nature of the construction and more on the peculiar characteristics given in the constituent elements of the different lines and angles? Is the straightness of the lines and the angularity of the angles somehow given along with the given points out of which the figure has been put together? That is, as no amount of rational mental construction could give us triangles by using colors or sounds as its ultimate material, but necessarily confines itself to points capable of expansion into lines and angles, does not reason, perhaps, merely apprehend relations somehow already given along with the given point? In other words, does the truth of the proposition depend on the rational, logical, consistent element in the mental construction, or on the empirical, given, unique characteristics of the points, the simple ideas of which the figure is ultimately constituted?

In the literature, the idealistic interpretation appears, on the whole, to be the most in favor. Thus Hartenstein states that for Locke the concept with its conceptual content is the decisive element. We think correctly so far as we think in accordance with the conceptual nature of our ideas. All truths (*aeternae veritates*) are determinations and inferences grounded in conceptual contents: and it is by this content alone that intelligence must submit to be guided, if it is to attain to a truth which is to have a more than contingent and temporary validity. We must not, however, suppose from this that the "content" refers in any way to the given, to the empirical, contingent, simple ideas. On the contrary, Hartenstein insists that it is relations between concepts as concepts, i.e., in distinction from and without reference to "things," which constitute the propositions out of which knowledge in the strict sense is constructed. It is only as conceptual, i.e., as thought-constructions, that they give us a knowledge which reaches beyond the present, and possesses the necessity and universality which logical thought alone can bestow. In fact, "things" are considered throughout as objects of knowledge only so far as they conform to our concepts. This almost Kantian exposition sufficiently attests the idealistic nature of Hartenstein's interpretation.[2]

A similar view is maintained yet more forcibly by von Benoit. Accepting Locke's physical hypothesis, he shows that mechanical processes of sense-stimulation lead the mind to form ideas. But he insists with great clearness that there remains for Locke an unbridged chasm between the

[2] Hartenstein, *op. cit.* 178, 195-98.

stimulus and the mental reaction, that there is nothing in the idea as such to suggest that it has any external cause, and that in fact we infer to the existence of a world of physical causation only because of the involuntariness with which certain ideas come to us, and of the pleasure-pain experiences which accompany them. We do not know the relations which external objects may possess, whether to one another or to the knowing subject; and the whole question as to the origin of our ideas is thus unanswerable.

But such a question is, after all, of secondary importance. The real problem for Locke is not the origin, but the knowledge-value, of our ideas. This knowledge, so far as we consider ideas from their empirical aspect, as they are given in contingent experience, can only be empirical, contingent, probable. A knowledge which is to transcend contingency must deal with relations apprehended between ideas as ideas, i.e., as mental constructions which present us, not with the contingency of fact, but with the universality and necessity of logic. Consider, e.g., a complex idea, such as is exemplified by any mode. It is formed partly by a process of abstraction. That is to say, we omit the context, the "here" and "now" of the empirically given, and retain the bare core of meaning, the conceptual essence of the simple experience. The further mental operation of "enlarging," which culminates in the mode, presents us with an expanded logical content, entirely loosed from its empirical moorings, and endowed with a new unity which is the work of the mind. The mode is thus a structure in which the empirical characteristics of the original datum have been transformed and fixed by the mind in such a way that the resulting concept is self-identical and changeless, a sort of mental counter with which further operations can now be undertaken. It ceases to belong to the world of empirical flux and enters the changeless world of logical construction. Relations apprehended between such changeless entities are themselves changeless, and present us with timeless truths (*aeternae veritates*). A system of such truths constitutes a knowledge which is universal and necessary, and transcends the contingencies of the empirically given.

On what does this universality and necessity depend? We began with the contingent and empirical, and have ended with a strict ideal of knowledge which transcends experience. How has this been done, and what is its value for life and for science? The answer is clear and consistent. Knowledge depends, not on experience, but on the mind. The distinctness and fixedness, on which the permanence desiderated by strict knowledge depends, is from beginning to end, the work, not of nature, but of the mind. Logical thought endows its concepts with these ideal characteristics, and on this mental basis builds up a system of relations which are as distinct and permanent as the ideas which they relate. Knowledge thus begins and ends in the sphere of the mentally constructed, and it is only what the

mind, in accordance with its own laws, has put into its objects, which can constitute science in the strict sense. Mathematics and ethics are strictly demonstrable precisely because they have their object in themselves, and do not need to go outside the system of concepts in order to refer to, e.g., a physical object. In fact, it is precisely this reference to something outside the concept, this reference to the contingently given physical object, which robs the researches of physicists of the universality and necessity of strict science. Such types of knowledge as are furnished by mathematics and ethics constitute standards, in the light of which we organise and give what meaning we can to the contingent approximations of experience and of the merely empirical sciences. It is, in short, such mental constructions as modes, with their necessary connections grounded in the nature of mind, which alone satisfy the ideal demand of mind for necessary and strictly universal knowledge. They do not, it is true, have objective reality; but empirical objects, to become known by mind, to lose their fragmentariness and contingency, must conform, as far as this is possible, to the absolute standard furnished by modal knowledge.[3]

On the whole, this kind of view is prevalent throughout the literature. The majority of the critics are openly idealistic, and even in the case of the professedly realistic interpretations, a closer inspection convinces us that *plus ça change, plus c'est la même chose.* For example, Tongers, perhaps the most definite of the realists, insists that Locke assumes a world of interacting substances, and with this as a background, proceeds to inquire as to the origin, validity, and limits of human knowledge in such a world. He has little difficulty in showing that in such a world real essences can never be completely known, and that consequently our nominal essences can give us only contingent, empirical approximations to knowledge of reality. He further examines Locke's conception of ideal knowledge of reality, in which what we human beings at present apprehend as color, sound, etc., would be perceived as modifications of the primary qualities, and shows that Locke's ideal presupposes a more perfect sensation, a fuller givenness. That is to say, Locke's ideal treats the logical processes employed in constructing nominal essences as a mark of imperfect knowledge, a *Notbehelf*, which would be done away with in a more perfect knowledge, in which substances would be fully given. In other words, Locke's theory is treated as a sort of empirical realism.[4] But between the sort of empirical realism championed by Tongers, and such a theory as von Benoit's, there is no necessary antagonism. On the contrary, such an empirical realism and such a transcendental idealism are two complementary aspects of the same philosophical theory: each is the

[3] Von Benoit, *op. cit.* 13, 15-19, 21, 24-27, 30-31, 34-38, 41, 44-47, 51-52, 59, 78-79.

[4] Tongers, *op. cit.* 13-15, 19, 26-29, 32, 38-49, 52-53, 57-58, 64. For the views of Turbiglio, von Hertling, etc., see the introduction, *supra*. For Campbell Fraser's view, see the appendix, *infra*.

converse of the other; and in general, the various interpreters of Locke may be said, so far as they take up any position at all, to adopt some form of this one view. What we have outlined above as an alternative—the view that modal knowledge is somehow given—is nowhere touched upon in the literature.[5] It remains, therefore, to examine Locke himself. In this examination we shall begin with the simple ideas, and proceed to the modes, asking throughout on what the relations between the ideas—the relations which constitute knowledge—depend.

If we ask in the first place, where our ideas come from, the answer is, from experience.[6] The world consists, for the corpuscular hypothesis tentatively adopted by Locke, of physical substances in a process of interaction. A body x, by its bulk, figure, motion, etc., is in process of causing changes in the bulk, figure, motion, etc., of other bodies, y, and z. These again are similarly causing changes in the bulk, figure, motion, etc., of x, and also of other bodies throughout the universe. It is by the motion of particles in x that a change of motion is produced in the particles of y and z. This is purely physical, and takes place with every bit of matter. Locke seems to regard these changes as due to transference of energy, in the process of which transference the various bodies, x, y, and z, are passive. Let us now suppose that y is an inorganic piece of matter, and z a human being. Physical motions take place passively in both, caused physically by motions in the atoms of x. But there is a difference between the behavior of y and the behavior of z. In y there is a mere physical transference of energy: but in z, to certain motions causally produced in the nervous system there are annexed certain non-physical phenomena, viz, conscious sensations.[7] Such sense-ideas may be of two kinds. On the one hand, they may be consciousness of the bulk, configuration, motions, etc., of x, or, on the other hand, they may be such ideas as the color red, the temperature sensation of warmth, or the affective sensation of pain. In both cases, the sensory idea is annexed to the changes of motion etc., in z, but in the former case the motion-annexation "resembles" the motions in x, while in the second case this is not necessary: e.g., the motion of a knife against the skin of the hand may cause (1) perception of its motion, and (2) pain. It appears that, as a general rule, where the stimulus is large enough to be recognisable by our senses, we perceive the primary qualities, and that it is mainly in so far as the stimulus is too small or too

[5] There is perhaps a hint in Köhler, *op. cit.* 75-76. It is, however, not taken seriously. Cf. Moore, *op. cit.* 51-52, Hartmann, *op. cit.* 39-41, 49, 51.

[6] II i 2, p. 205. In what follows, only ideas of sensation are dealt with. This is for the sake of clearness and brevity. The conclusions hold good, however, also of ideas of reflection. Cf. Riehl, *op. cit.* 2:29.

[7] This is due to the will of the Deity—i.e., is inexplicable in terms of strictly physical science. Cf. II ix 3, pp. 183-84; xxi 75, pp. 373-74; xxxi 2, p. 503; xxxii 14, p. 519. Cf. *Reful. Norris*, secs. 14, 15, p. 466; *Nat. Phil.*, xi, p. 492; cf. Fraser 1:192.

slight to be apprehended clearly as it is, that we receive the ideas of color, pain, etc.[8]

In sense-experience, then, the mind is passive. The material of knowledge is given: and as given, in its ultimate elements, the simple ideas, it can not be created, altered, or destroyed.[9] When certain changes take place in the nervous system, it is impossible for the attentive mind to apprehend anything other than the ideas annexed to those changes. All that the "activity" of mind can perform, is to rearrange what is given to it: to alter in any way the content of the elements given, is beyond its power. The given, the passively received, thus represents in one direction the final barrier to the knowledge-seeking mind. All rearrangement, all organization of the given which the mind can bring about, can never change the position of this barrier. It represents an absolute limit.[10]

Consider, e.g., what takes place in abstraction. In sense-experience we have been presented with a chaotically complex mass of sensory material. The mental process of abstraction isolates various elements, omits some, and retains in consciousness certain others, *a*, *b*, *c* . . . Where *a*, *b*, *c*, etc., occur frequently in varying connections, we gradually become able, by this process of abstracting classification, to reduce to some kind of order the otherwise chaotic mass and number of individual experiences. This analytic process results ultimately in giving us distinguishable elements, the various simple ideas.[11] In other words, in acquiring distinct elements, on the basis of which some attempt to build up a system of knowledge may be made, we merely analyse out what is given. We add nothing; we merely leave out what is irrelevant, and retain what is relevant. Thus, so far as the content of the elementary simple ideas is concerned, we have, by our process of analysis, altered nothing but our own mental chaos. By sifting and rearranging the complex sense-content, we have cleared up our ideas, but have changed nothing in the content of the given ideas themselves.[12]

It is important that no alteration of content should take place. For this passivity of the sense-organs in causal connection with the external world alone guarantees the real validity of our ideas.[13] It is only as passively annexed to physical changes that our ideas can be used in building up a scientific theory of such changes. It is only as unalterably accompanying certain changes in the nervous system that the idea of unity is a

[8] II ch. viii, esp. secs. 11, 13, 15, 22, 23, pp. 171, 172-73, 177-78; cf. II xxiii 13, p. 404; III iv 10, p. 36; cf. Fraser 1:178, 179.

[9] II i 24, pp. 142-43; ii 2, p. 145; xii 2, p. 214; xxii 11, p. 388; III v 2, p. 43.

[10] II ii 3, p. 146; xxiii 13, 28, pp. 405, 417; III xi 23, p. 160.

[11] Von Hertling, *op. cit.* 12, 33.

[12] II xi 1, p. 202; xxxi 12, p. 511; *Conduct of U.* sec. 39, p. 97. Cf. Fraser 1:203, n. 2; 235, n. 1.

[13] II xxxi 12, p. 511. Cf. in the philosophy of our own time, Riehl's theory of sensation, as developed in *Der philosophische Kriticismus*. Leipzig. 1879. 2: ch. 1. esp. pp. 63-64.

trustworthy apprehension of physical unities, that the elementary sense-ideas of space, time, and motion, reliably connect us up with the movements in space and time. This connection is the sole basis of the "reality" of our knowledge—i.e., of its applicability to the world of sense-experience. Any attempt to interpret Locke's thought without recognizing the fundamental importance of this fact, without realizing that in the simple ideas alone are we in direct contact with reality,—is doomed from the very beginning to misunderstanding and failure to reconstruct the views of Locke.[14]

The content, then, of the simple ideas gives us so far direct knowledge of reality. The process of analysis which has resulted in clearing up our ideas, has in no important respect altered the content of these elementary conceptions. But the analysis has not only made our ideas clear. It has also made them distinct, or at least sharply distinguishable.[15] It is not only the redness of a red object that we apprehend: we also apprehend it in distinction from objects which are blue. In other words, there is a negative, as well as a positive side, to every apprehension. We know infallibly that the idea of white is what it is, and is not the idea of red; the idea of yellow is the idea of yellow, and not the idea of blue. As with these, so with all our simple ideas.[16] So far as they have been analysed out, their content is not only clear, but also distinct from the contents of other simple ideas; and in virtue of these distinctions of content, which are at once apprehended or "discerned," we are given a large number of propositions of definite knowledge-value.[17] The *clear* apprehension of the elementary contents is what gives us a point of contact with reality. The *distinct* apprehension of these same simple ideas is the basis which permits us to organize them into an elementary system. Finally, as systematised in accordance with distinctions which are of real validity, such a system gives us real knowledge, i.e., knowledge which is not only consistent, but also has a definite connection with the knowable world of sense-experience.[18]

Such a system, however, does not take us very far. To apprehend these elementary contents clearly in their own nature, and also as distinct from one another, after all leaves us with the merest A B C of knowledge. For purposes of scientific construction, more is needed.[19] This "more" seems, however, to depend upon the basis previously established. As we have seen, in analysed-out experience we can distinguish one simple idea

[14] II viii 17, p. 174; xxx 2, p. 498; xxxi 2, p. 502; xxxii 14, p. 519; III iv 17, p. 42; v 2, p. 43; IV iv 4, pp. 229-30; vii 4, p. 269; xi 8, p. 322; cf. Works IV pp. 75-77; *Cond. of U.* sec. 31, pp. 86-87.

[15] II xi 3, p. 204; xiii 11, p. 226; Works IV pp. 29, 42, 221; *Cond. of U.* sec. 39, p. 97.

[16] II xxv 2, p. 428; IV i, p. 169; vii 10, p. 277; vii 4, p. 271.

[17] Cf. also *Cond. of U.* secs. 29, 31, pp. 82-83, 86; Works IV pp. 383-84.

[18] II xi 1, 5, pp. 202, 204-5; xxviii 19, p. 484; xxix 4, p. 487; IV iv 8, pp. 252-53; vii 4, pp. 269-70; xii 14, p. 354; cf. Works IV, pp. 239-40.

[19] III vii 2, pp. 98-99.

from another. But on this basis we can at once go further: we can also distinguish a simple from a complex idea, e.g., the idea of one from the idea of two or of two hundred, or the ideas of red and blue from the idea of purple. This ability is of especial importance when we come to deal with simple modes, i.e., with complex ideas which represent multiples of one and the same simple idea. For example, two is one plus one, and it is the ability to distinguish the number of simple ideas in *two*, which enables us to distinguish two from one, or also from three. So also in distinguishing 90 from 91, a square from a circle, etc., and in general we can distinguish all complex ideas from one another, just so far as we can analyse out the quantity, as well as the quality, of the simple ideas therein contained.[20] On this basis, then, of distinguishing our clearly apprehended simple ideas, depends (1) the ability to distinguish a simple from a complex idea, and (2) a complex from a complex idea. Ultimately, in fact, it is upon this basis that arithmetic, and in a word, the whole of mathematics depends, with its overwhelming importance for the organization and scientific evaluation of experience, so far as quantitative measurings can be introduced into that experience.[21]

Furthermore, it is not merely quantitative relations between contents which can be clearly apprehended. In virtue of our ability to distinguish one content from another, we are enabled to apprehend also content-distinctions, qualitative relations. We can distinguish not merely a simple from a compound idea, but also a color from a smell, a more intense from a less intense color, a more pleasant from a less pleasant odor, a more close approximation to an ethical standard from a less close approximation. In other words, we can apprehend not merely relations of identity and difference. These indeed furnish us with the ultimate basis. But on that basis we are able to apprehend also relations of quantity and quality, in time, in space, in internal experience,—in a word, we are able to apprehend all sorts of "habitudes and relations" between our ideas, so far as those ideas are clearly analysed out.[22]

A difference must, however, here be recognized. Qualitative relations, though these can certainly be apprehended, are not susceptible of such finely distinguished gradations as are quantitative relations. In quantity, any difference, however slight, between two quantities, can be recognized and noted, in terms of some scale of units: 99 is as distinct from 100 as 1 is from 2. In the case of qualitative relations—degrees of sweetness, of whiteness, of spatial sensations, etc.,—such accurate distinctions are not possible. Locke is not, of course, aware of the Weber-Fechner law, but he

[20] II viii 18, p. 175; xiii 1, p. 218.

[21] II xvi 4, 8, pp. 271, 274; III ix 19, p. 118; IV v 6, p. 247; vii 9, pp. 273-74; xiii 3, pp. 358-59; xv 1 p. 363; cf. *Jour.* 1681, King 1:227.

[22] II xiii 22, 27, pp. 232, 235; xix 1-2, pp. 298-99; *Cond. of U.* sec. 15, p. 57.

insists with sufficient emphasis that qualitative distinctions can not be made with anything like the accuracy of quantitative distinctions, and that consequently, so far as the construction of science is concerned, it is to the application of mathematical methods that we must at present look.[23] At the same time, he is not without hope that the adoption of some quasi-algebraic method—yet to be discovered—may enable us to deal as satisfactorily with other relations as we now can with quantitative relations.[24] This hope is grounded on the fact that qualitative relations also can undeniably be apprehended with a fair degree of clearness and distinctness; and the clearness and distinctness with which the ultimate elements of knowledge can be apprehended is the accepted basis on which alone a superstructure of scientific accuracy can be raised. If, then, some method can be discovered which will enable other relations to be apprehended as accurately as is the case with quantitative relations, then a marvelous advance of science will follow. But until such a discovery is made, strict science will be restricted primarily to mathematics, and other subjects can be designated scientific only so far as they admit of mathematical treatment. Apart from such treatment we have to trust to empirical methods, i.e., to the gropings which precede science, and consequently, so far as any subject (such as physics) is restricted to empirical methods, so far we have not scientific certainty, but only probability.[25] Such probability is perhaps sufficient for our guidance in this mundane sphere, i.e., for merely practical purposes: but it falls far short of the ideal of philosophical certitude. This is attained only in theology, ethics, and mathematics.[26]

This leads us to the consideration of a further point. We have regarded the empirical method as unscientific groping: and yet we have seemed to see that all knowledge in the strict sense is also somehow based on experience. How are we to understand the difference? Both are experiential: what distinguishes mere groping from scientific method? The answer is to be found by developing the difference between unanalysed and analysed experience. In relatively unanalysed experience, for instance, we find various relations of coexistence and sequence; but without considerable analysis we can not know whether such coexistence etc., is relatively fortuitous, or whether it presents us with a case of causal *law*, i.e., of *necessary* coexistence or sequence. In fact, in the absence of methods which would give us greater insight into causal relations than we as yet possess, the establishment of causal laws, of necessities of coexistence and sequence among physical

[23] II xv 1, p. 258; xvi 3, p. 270; xviii 6, p. 295.

[24] IV xii 15, pp. 355-56; xvii 11, p. 406; *Cond. of U.* sec. 29, pp. 82-83.

[25] II xxix 13, pp. 492-93; IV vi 10, p. 259; xii 9, p. 349.

[26] II xvii 9, p. 283; xxiii 13, p. 404; IV xii 7, pp. 346-47; xvii 10, pp. 405-6; cf. *Educ.* secs. 190, 194, pp. 182-83, 186 (the application of mathematics to physics by "the incomparable Mr. Newton").

phenomena, is an ideal to which we can only inductively approximate.[27] The reason why we have to remain satisfied with probabilities, with approximations to scientific knowledge in place of knowledge itself, is because we have as yet discovered no means of insight into causal relations at all comparable to our insight into mathematical relations; our analysis is incomplete, and until we discover new methods of rendering it as complete as in mathematics, only probability can be attained.

How does analysed experience differ from this? Mathematics, for instance, in the pre-scientific age before "Thales, or whoever it may have been," was itself a matter of empirical groping. According to Locke's view, the scientific method was reached by means of an analysis which based all mathematical construction of modes on the clearly and distinctly apprehended unit. By the application of the unit in arithmetic, any two numbers, however slight their relative difference, can be accurately distinguished in terms of the number of units which enter into their composition, and it is on the clearness and distinctness of the elements discovered by this analysis, that the clearness and distinctness of mathematical constructions depend. The scientific method, then, consists in analysing down to elements which can be as clearly and distinctly apprehended as can the arithmetical unit.[28]

A further question at once arises. As we have seen in our introduction to the present study, the difficulty experienced by the critics is not as to the clearness and distinctness of mathematical constructions, but as to how such constructions have real validity—i.e., how they can apply, as they do, to the world of sense-experience. As we have noted in the present chapter, the almost universal agreement of the critics is influenced by the Kantian reply to this (Kantian) question. Hence, undoubtedly the common idealistic interpretation, with its two typical sides of empirical realism and transcendental idealism. Our present task is to discover, if possible without Kantian bias, precisely what Locke's own answer to this question is.

Locke holds that in our simple ideas we are in direct contact with reality. The idea is sometimes different from the reality, as in the obvious case of secondary qualities, but in every case there is at least a constant connection between the idea and reality, on which we can rely. So far as analysis enables us to distinguish clearly our simple ideas, we are still in contact with reality, and the same is true of our complex ideas also; for our analysis has added nothing; it has merely cleared up our subjective confusion, and enabled us to apprehend distinctions which are there to be apprehended, as soon as ever the right method of analysis is applied.

[27] II xiii 28, p. 237; III v 30, p. 80; IV vi 10, pp. 258-59; vii 5, p. 271.

[28] Cf. II xxix 2, p. 487; IV vii 9, pp. 273-74.

Insight into the relations of identity and difference is thus insight into the nature of reality, and so far as mathematics is constructed on this basis, reality is mathematical.[29] In modal science it is not astonishing or paradoxical,[30] but strictly and literally true, to say that the nominal essence and the real essence coincide.

Reality is not only mathematical: it is also physical. Every one of the primary qualities holds of it.[31] But in the case of the primary qualities other than number, we are as yet deficient in that insight on which the clearness and distinctness of mathematics depends. In Locke's phraseology, the nominal and the real essences do not quite coincide. We know only the nominal essences, and have no means of measuring with exactitude how far they differ from the real essences. That is why we have, not certainty, but only probability. But where we have direct insight into the structure of reality—where the nominal and real essences do coincide, as in the case of mathematics—there we have more than probability: we have knowledge in the strict sense. We no longer relate apprehensions in a hypothetical and experimental way: we apprehend relations as they are.[32] Relations between our clearly and distinctly apprehended simple ideas are given; relations between such ideas and the complex ideas based on them are also given; and finally, relations between the complex ideas themselves, such as modes, are also given.

Knowledge is, then, somehow given: and the result of our study of Locke seems to contradict the general interpretation which we have found in the literature. But how "given"? Surely any reader of the first book of the *Essay* must feel at once that there is nothing easy-going about knowledge, from Locke's standpoint. It is certainly not given in such a sense that we have merely to "look and see." Knowledge is the work of the mind.[33] How is this to be understood? The idealistic interpreters have busied themselves to unfold the "workings" of Mind: is not modal unity, for instance, mind-made, arbitrary? And is it not precisely the situation of having a "reality" on the one hand, and a heterogeneous mind, working in accordance with its own laws, on the other, which has given rise to the Problem of Truth, the problem of reconciling the two?[34] In the interpretation to which our present examination of Locke seems to

[29] II viii 18, p. 175; xxix 16, p. 496; xxx 2, p. 498; xxxi 3, 11, pp. 504, 511; xxxii 24, p. 524; III iii 18, pp. 28-29; IV vi 4, p. 252; cf. C. Baeumker, Zur Vorgeschichte zweier Lockescher Begriffe. *Arch. f. Gesch. d. Phil.* 1907-1908. 21:512, 513. Cf. Works IV, p. 405.

[30] Cf. Dathe, *op. cit.* 54. In fact a position somewhat analogous to Locke's is taken in our own time by Wundt. Cf. W. Wundt, *Logik.* Stuttgart. 1907. 2:189-92.

[31] II viii 17, 22, 23, pp. 174, 177-78; xxxi 2, p. 503; Works IX, pp. 305-6 (letter to Molyneux, Jan. 20, 1692).

[32] III xi 16, p. 156; IV xii 8, p. 347; *Cond. of U.* sec. 26, p. 79.

[33] Cf. Köhler, *op. cit.* 74-77.

[34] Cf. Moore, *op. cit.* 48; Morse, *op. cit.* 14, 43; Dathe, *op. cit.* 54.

point, are we not neglecting this vital question: if knowledge is given, how can it be the workmanship of the mind, and if it is the workmanship of the mind, how can it possibly be given?[35]

In answer to this question, we must first introduce and carry through a distinction which appears, in this connection at least, to have been overlooked in the literature: the distinction between logical and psychological. Both are important for Locke: and for a correct understanding of his thought, it is necessary to keep them somewhat sharply distinct.[36] From the psychological view-point, knowledge is not given: it must be worked for. Only by "exercise," unsparing and unremitting, only by hard work is anything so valuable as knowledge to be attained. It is from this view-point that knowledge is said to be the *work* of the mind. The chief emphasis is on the *work*, and not, as the idealistic critics have placed it, on the *mind*. This view-point is quite characteristic for Locke, and von Hertling rightly points out that in the first book it is the pedagogue, rather than the epistemologist, who speaks. It should, however, be added that this is true, not only of the first book of the *Essay*, but generally, throughout Locke's writings.[37] This psychological view-point has been generally recognized in the literature: it is the logical view-point which has tended to be overlooked. From this standpoint, the question is not as to the process-side of acquiring knowledge. What Locke is dealing with is the fact that we do have knowledge. However hard it may be to describe the process, however incomprehensible certain stages of that process may be,[38] the fact remains, that we can and do have knowledge. We do actually know, and we do know something which exists independently of our knowing it.[39] It is from this non-psychological view-point that knowledge is "given": i.e., whatever the process by which the knowable has become a known, it has not altered, in any important way, the epistemological characteristics of the knowable content.

What then is the "work of the mind"? It consists, for Locke, chiefly of two parts, which we may perhaps name (1) analysis,[40] (2) synthesis.[41] In a general way, the mind attends to what is given; and what is given is the unanalysed chaos of sensations and reflections. This, by the processes

[35] Cf. Green, *op. cit.* Sec. 50, pp. 40-41.

[36] The distinction is, of course, frequently noted in the literature, but not in this connection; see Freytag, *op. cit.* 23, Tongers, *op. cit.* 15. Martinak especially charges Locke with frequently confusing the two view-points, but his detailed charges have received detailed answers from Ollion.

[37] It is noticeable, perhaps especially in the *Conduct of the Understanding* and the *Education*, and also in certain of the papers preserved in the biography by Lord King. But it is found also in the *Essay*, *passim*.

[38] As, e.g., the transition from physical stimulus to psychical idea.

[39] II xxxi 2, pp. 502-4; xxxii 4, p. 515; IV iii 6, 28, pp. 191, 221; cf. von Hertling, *op. cit.* 21.

[40] Cf. Morse, *op. cit.* 23.

[41] III v 4 ff., pp. 44 ff.

of perception, retention, abstraction, naming, comparing, etc., the mind sifts out and classifies[42]—in a word, analyses into its component parts, the elementary "simple ideas." As we have seen, this process of analysis, while it does result in clarifying and "determining" our ideas, is a mere matter of rearranging what is given, without altering its content—i.e., is a matter of removing the chaos and confusion from our minds. It leaves us with clear and distinct, in place of obscure and confused, ideas. But it does not in any way alter the contents of those ideas; those contents are, as we have seen, given once and for all, and no mental process can create, alter, or destroy them. Psychologically, then, the work of the mind consists in sifting and analysing out the given mental content, and results in exchanging for the confusion of mental chaos, a clearness and distinctness which is the basis of mental organisation; more simply, it results in clearing up our ideas. But logically, the contents of the simple ideas have been present from the very first, and the process of analysis has not altered them on their content-side, as knowables, at all. The process of synthesis, by means of comparing, compounding, naming, etc., then builds up, on the analysed-out simple ideas as foundation, ideas which are complex, modes, substances, relations. But here too the mental process is merely a matter of external arrangement of contents: the contents, from the epistemological view-point, remain unaltered. The workmanship of the mind, then, whether in analysis or in construction, adds nothing to the given contents. It is always a process of classification, a rearrangement which alters the relative position of the ideas in our minds, but does not alter their ultimate meanings.[43] The function of this mental activity is so to order our ideas that we are enabled to apprehend relations which really subsist between the contents, but which, without such rearrangement, would have remained unnoted by us. By analysis we are enabled to apprehend the relations which subsist between ideas which are simple, and by synthesis, the relations dealt with in science, relations which subsist between such ideas as modes, which are complex.[44]

One further point remains to be discussed. Simple modes, like all complex ideas, have something "arbitrary" about them, and this arbitrariness has proved a serious stumbling-block to the interpreters.[45] On the other hand, number and figure, which are certainly simple modes, are explicitly recognized by Locke as modes or affections of bodies and spirits, and as accordingly coming under that division of the knowable which he

[42] III iii 13, pp. 23-24.

[43] Cf. von Hertling, *op. cit.* 9, 12, 13, 33.

[44] Even writers so recent as Dathe and Köhler entirely misunderstand this point. Dathe has, it is true, the idealistic bias; but Köhler regards Locke as a realist (*op. cit.* 32, 34.) But perhaps also Köhler is himself idealistically inclined (cf. pp. 38, 77). Both regard him as a "subjectivist" on account of his definition of knowledge.

[45] Cf. von Hertling, pp. 17, 22-24, 27-30, 46, 87-88, 214, 241-42.

calls "physica."[46] This would seem to be inconsistent with any considerable degree of "arbitrariness," and Fraser, as well as certain of the Continental critics, believes them to resemble closely the passively given simple ideas—in which arbitrariness is entirely excluded.[47] Our question therefore becomes, How far are simple modes passively given, and how far are they "arbitrary"?

As we have already seen, not only the content of the simple idea is given, but so far as analysis has succeeded in penetrating to as clear and distinct a simple idea as the arithmetical unit, the quantitative relations between units are also given. In the nature of the case, there is no limit to the progressively apprehended arithmetical series, 1, 2, 3, 4 . . . , and Locke undoubtedly tends to regard the "vast extent of things" as greater than our thoughts, i.e., as large enough for our thoughts to lose themselves, if indeed it be not actually infinite. The content, then, of any simple mode in arithmetic is "given," i.e., has real validity: its nominal essence so far coincides with the real essence, as is indeed the case, not only in arithmetic, but also in mathematics generally. What, then, is "arbitrary" about the simple mode? From a study of the third book of the *Essay*, in which, perhaps, Locke is most definite, we find that, while in "things" the relations which might conceivably have been united into modes are infinite, only some few of these have actually been so united and fixed with a name by man, and that this has been done differently in different countries and ages. Expressed symbolically, we might say that in "reality," elements *a*, *b*, *c*, *d*, *e*, *f*, *g*, *h*, *i* . . . *n* might be synthesised so as to constitute a certain mode, but that only *a*, *c*, *f*, *g*, *h* have actually been so synthesised, and that, in actual fact, different men have effected this synthesis with certain differences, omitting *c* or *g* in different countries. The explanation offered by Locke is, that while theoretically any such elements might have been united and named, the conveniences and practical needs of life have led to the unifying and naming of only some few of these possible compounds. It is this that is arbitrary, viz., the number of elements actually recognised and named as a mode.[48] In other words, the so-called arbitrariness of modes belongs to the practical side of life, to the process of arranging our ideas, to the psychological aspect of knowledge. Such arbitrariness has no influence on the knowable contents as such. These and their relations remain what they are, whether human beings have so ordered their ideas as to apprehend such modal relations or not,[49] and from the epistemological view-point, there is nothing arbitrary

[46] IV xxi 2, p. 461.

[47] Fraser 1:521; 2:42. n. 2; Ollion, *op. cit.* 201; Kayserling, *op. cit.* 17.

[48] See esp. III v secs. 3, 8, 9, 13, 14, pp. 44, 48-49, 52-53; cf. von Hertling, *op. cit.* 22-23. Instances of such simple modes are, numbers (II xvi 5-6, pp. 272-73), *hora*, *pes*, etc. (III v above).

[49] III iii 19, p. 30; cf. Fraser 1:499. n. 1.

about the simple modes. The knowledge which consists in the apprehended relations between simple modes is thus given, and is merely a more complex form of the distinctions between simple ideas, the relations of identity and diversity, which are also, as we have seen, given.[50]

After this brief sketch of Locke's theory of knowledge, we may, perhaps, summarise what we have discovered concerning the position, in that theory, of simple modes. Analysis of the empirically given sense-complex has provided us with simple ideas. In these simple ideas we are, from the logical view-point, in as direct contact with "reality" as is possible for human beings. We are able with certainty to distinguish our simple ideas from one another, and such knowledge is valid of reality. We are also able to distinguish simple ideas from simple modes: such knowledge also is valid of reality. We are further able, on the same foundation, to distinguish simple modes from one another: this knowledge is also "real" knowledge. These distinctions are partly quantitative, partly qualitative. On the quantitative side we have succeeded in penetrating down to the arithmetical unit, a simple idea capable of all the clearness and distinctness desiderated for ideal knowledge; all modal knowledge based on such simple ideas —i.e., the whole of mathematics—is equally clear and distinct, and gives us certain real knowledge.[51] Our qualitative analysis has not succeeded in penetrating so far, and consequently on this side we can, in our modal constructions, attain, not certainty, but only probability. Locke is, however, hopeful, that here also some quasi-algebraic method will be discovered, which will enable us to attain in other subjects a certainty equal to that of mathematics.[52] The knowledge given by simple modes is then always of real validity as far as it goes, but only in the case of quantitative relations has the work of the mind so far succeeded in attaining also ideal clearness and distinctness.

If we now ask ourselves definitely, what the function of simple modes is, we are in a position to answer, (1) psychologically, i.e., from the process-side of knowledge, simple modes are rearrangements of mental contents, which place us in such a position that we are enabled to apprehend relations which really subsist between elements of reality;[53] (2) logically, i.e., from the content-side of knowledge, simple modes, in spite of being mental constructions, do not somehow come between us and reality, as something subjective might be contrasted with something objective. On the contrary, it is precisely so far as the mental process of sifting and building up our ideas has been carried through most rigorously, as in the case of mathematics, that we are in closest contact with objective reality, and are guiding our thought by "the nature of things," so that nominal essence and real essence coincide.

[50] IV iii 29, pp. 221-22; cf. von Hertling, *op. cit.* 63-69, 88.

[51] II xvi 3-4, pp. 270-71.

[52] Cf. von Hertling, *op. cit.* 69.

[53] Cf. IV viii 3, p. 295.

CONCLUSION

This section falls naturally into two parts. In the first, we shall attempt, from our present position, to resolve briefly the difficulties raised by previous interpreters, as set forth in our introduction. This will be followed by a restatement of our own conclusion as to the meaning and function of simple modes. In the second part we shall state yet more briefly the general conclusions to which we have come concerning the philosophy of Locke, so far as our specific investigation has thrown light on this wider question.

A. *Specific.* When the critics state that the term "simple modes" is ambiguous, they mean that Locke uses it in three definite senses:—(1) as "accidents," (2) as combinations of a single simple idea, (3) as modifications, or varieties, or sorts, of some simple idea. The answer to this difficulty is:—(1) All modes are accidents, i.e., are correlative to substances: this is a general statement, and is true of "combinations" and "varieties," which are thus not mutually exclusive species. (2) All simple modes are "combinations" of a single simple idea. It should, however, be added that some modes are quantitative combinations, while others are combinations of quality—"degrees" of a single simple idea. (3) In regard to the third distinction, this is a mistake. A careful comparison of all the instances shows that (a) Locke never uses "mode" in the sense intended by the critics —i.e., as a "sort" or "variety"—, and (b) "varieties," whenever the term is used, is for Locke synonymous with "combinations." What the critics are trying to express in this distinction is that certain of the modes are "degrees," but they have not succeeded in making the true division clear. The true division is into quantitative and qualitative, and it is actually made by Locke himself.

The other criticisms in the group which is concerned with the meaning of simple modes are relatively trivial. The lists at the beginning of Chapters II, III, IV, (above) admit that certain *words* are used by Locke also as simple ideas, as relations, and as mixed modes. But the main body of those chapters has also shown the differences in view-point which underlie the apparent verbal carelessness, and our conclusion must be, that when Locke is using these words explicitly to signify simple modes, the instances sufficiently square with the definition.

If we turn to the second group of criticisms, we find that our present position enables us to answer them briefly. The distinction between analytical and synthetical is intended in the Kantian sense. Analytical propositions give only *begriffliche Erkenntnis*, and are, in fact, what Locke calls "trifling propositions"—true indeed, but without real value; synthetical propositions always contain an element of *Anschauung*, or, as Locke

would put it, give us "real" knowledge. From what we have come to see in our last chapter, it is plain that modal knowledge is of the synthetic kind,[1] and that only a strong idealistic bias prevents the critics from appreciating this. It should perhaps be added that Locke's instances are not always happily chosen.

The main difficulty, which has been almost universally experienced, is, how merely subjective constructions can give objectively valid knowledge. This has been resolved by showing that, for Locke, the "subjective construction" is a merely psychological process of rearranging our ideas without alteration of content, and that "objectively valid knowledge" has been present in our experience from the very first, awaiting only a correct method of analysis and synthesis in order to be discovered. Analysis gives us the simple ideas, and synthesis gives us the modes.

Our own specific conclusion, then, is that simple modes are quantitative or qualitative enlargements of simple ideas, in which we are in direct knowledge-contact with reality. They represent rearrangements or organization of our otherwise chaotic experience, in such a way that we become able to apprehend hitherto undiscovered relations, which really subsist between elements of reality. This function is most successfully performed by the mathematical modes: in the other modes we are still awaiting the discovery of some new method of organization which will give us similar insight into the structure of reality.

B. *General.* Locke is not an idealist, either of the Berkleian or of the Kantian type. His attitude towards nature is not that of a judge, but of a modest pupil, and he is certainly to be ranked with the philosophical pre-Copernicans. Few would, however, care to class him with the "dogmatists," for he is critically self-conscious on the subject of his chief discovery—viz., wherein certainty, "real" certainty, consists.

He is also not a realist. His professed "nominalism" indeed should preclude this attempted interpretation, but it is true that he has certain leanings in this direction, and that the nominalism would vanish, if only a more perfect method of analysis in the non-mathematical sciences could be discovered.

What is he, then? It is dangerous and unwise to attempt to sum up his work in one phrase, for there are many sides to his philosophic activity. Perhaps we should err least if we were to pronounce him an empiricist with leanings towards realism—understanding the term "empiricism," however, in such a way as to include his view that in mathematics, ethics, and theology, we have succeeded in hitting upon a method which gives us "real" knowledge of a demonstrative or scientific kind.

[1] Cf. IV viii 8, pp. 298-99.

APPENDIX

LOCKE'S USE OF THE TERM "SUGGESTION"

In the literature, it has long been asserted that the term "suggestion" occupies a peculiar position in Locke's philosophy. Webb, for instance, in claiming for the "understanding" a place beside sensation and reflection, as a third source of simple ideas, gives as instances of such ideas *suggested to* and superadded by understanding, pleasure, pain, unity, existence, power, succession, and also the ideas of finite and number.[1] Manly similarly points out that pleasure, pain, etc., can not be explained as arising from sensation and reflection; they thus come into the mind in some third way, *suggested* or carried in, in connection with other ideas, in such a way as to give rise to an unsolved problem.[2] The problem thus indicated by Webb and Manly is dealt with further by Curtis and von Hertling, though without explicit reference to the term "suggestion." Curtis regards "intellect" as the third source of ideas recognised by Locke, and gives as instances, not only simple ideas such as unity and power, but also simple modes such as finiteness, general ideas, and ideas of relation.[3] Von Hertling is content to point out that the relation between "accompanying ideas" such as unity and existence, on the one hand, and ideas of sensation and reflection, on the other, remains unexplained.[4] Köhler simply refers to pleasure and pain as "accompanying phenomena," but without any feeling of the difficulty.[5] It is, however, when we turn to Campbell Fraser's edition of the *Essay*, that we find the keenest sense of the problem combined with the strictest insistence on the signification of the term "suggestion" in the philosophy of Locke.[6]

In his critical edition of the *Essay*, Fraser is to some extent influenced, in the interpretative notes as well as in the Prolegomena, by his previous study of Berkeley. It is consequently not easy to discover, in his interpretation of ideas said to be "suggested," whether it is Berkeley's views, or Locke's, which are set before the reader. Fraser's own statements, so far as these are unambiguous, imply that in his opinion a Berkleian interpretation is justified, though Locke himself is unconscious of the full

[1] Webb, *op. cit.* 78-81.

[2] Manly, *op. cit.* 36-40.

[3] Curtis, *op. cit.* 35-37.

[4] Von Hertling, *op. cit.* 27.

[5] Köhler, *op. cit.* 43.

[6] References are given *infra*. Ollion, writing (in 1909) the largest and most authoritative book on Locke, takes a stand very like Fraser's; the only difference is that Ollion definitely interprets Locke as a "critical" idealist, i.e., in a Kantian spirit, whereas Fraser's interpretation is more in the spirit of Berkeley.

consequences of such a position.[7] There is, to a slighter extent, a similar difficulty with regard to Leibniz and Reid, and also with regard to Fraser's own idealistic theories. It is therefore with some hesitation that we attempt to put together Fraser's statements.

In his interpretations, Fraser appears to be most strongly influenced by two view-points. In the first place, he attributes to suggestion that function in sense-perception which adds to the immediate sense-datum the memories which give it meaning and thus fill out the present content with many qualities actually absent. This takes place by means of a "latent judgment." We have here a case in which Locke's views are explicitly interpreted by reference to Berkeley, and it is perhaps worth noticing that this is the sole use of the term "suggestion" to which attention is drawn in Fraser's own index to the *Essay*.[8] In the second place, the idealistic philosophy favored by Leibniz, Berkeley, and Fraser himself, tends to regard certain ideas as transcending sense-experience, and as due to the "latent constitution of the mind." Such ideas as space, motion, infinite, etc., are not entirely explicable in terms of sense-data. In fact, sense-experience presupposes certain laws: and though we become conscious of them in experience, they are, as general laws of experience, as *pre*suppositions, not interpretable by a pure empiricism. Empirical change or succession *awakens* the idea of time, sensuous things awaken the idea of space, but so far as the ideas "awakened" are more than, e.g., a sense of simple contact etc., they are "suggested" by something in intelligence.[9] Visible and tangible extensions are, perhaps, matters of sense-experience, but an idea of space which "connects us with the infinite" is a far different idea, necessarily suggested to the mature mind by what is seen and touched, but definitely transcending these merely physical occasions. Similarly "power" is an intellectual suggestion, not a mere visible or tangible phenomenon: and such ideas as existence and unity are more than merely sensuous presentations. Such ideas must be carefully distinguished from the occasional phenomena with which they are blended, and which suggest them. Even such an idea as solidity contains an intellectual, as well as a sensuous, element. Our senses can only inform us of our own transitory feeling of resistance. But, on occasion of this, intelligence may necessarily suggest the idea of an absolutely or permanently incompressible object. This transcends sense, and should be sharply distinguished from the mere feeling.[10]

So far the general position is sufficiently clear. Fraser has made use of the common distinction between empirical and transcendental. Some ideas

[7] Fraser, Ed. of *Essay*, I, p. cii.

[8] *Ibid.* Index B, II, p. 494. The references are: I, pp. 186, 187, II, p. 80. Locke himself nowhere uses the term "suggestion" in this connection.

[9] Ed. of *Essay*, I, pp. 156-58, 261, 286.

[10] *Essay*, I, pp. 151, 156-57, 163, 164, 206, 261, 311, 316.

are empirical, and can be accounted for (uncritically) on Locke's empirical hypothesis. But certain ideas, such as unity, space, time, infinity, etc., are "far different ideas," and are to some extent felt even by Locke to call for some other mode of treatment, as is seen from his half unconscious use of the term "suggestion" in this reference. But a difficulty arises. Does Fraser insist on a sharp distinction between ideas which are empirical, and ideas which are "suggested"—these latter being transcendental ideas due somehow to the "latent constitution of the mind"? Or does he ultimately regard *all* ideas as transcendental, all equally "suggested"? The general impression left on the mind of the student of Fraser is that the distinction is emphasised (1) for the sake of readers who may be beginning the study of philosophy, and (2) in order to indicate that such a distinction is important for understanding the philosophy of the seventeenth and eighteenth centuries, but that Fraser himself ultimately believes that all ideas whatever are transcendental, and arise in the mind on the occasion of some stimulus or "suggestion." This is stated to be the case with perception of real existence, with secondary qualities, and with the "materials" of our knowledge, i.e., with all simple ideas, as well as with ideas such as unity and space, which have been already considered. It remains uncertain whether Fraser believes that Locke "unconsciously" shares this view, though this is to some extent implied.[11]

From this brief review of the literature bearing on this point, there appear to be two main questions:—(1) the problem of the relation of such ideas as pleasure, pain,[12] existence, power, unity, succession, to the other simple ideas, and (2) the reflection of this half-felt problem in Locke's use of language, as indicated by the term "suggestion" being employed in regard to such ideas.

So much for the literature. What are we to say of Locke himself? Does he have any sense of difficulty in the relation of such ideas as power, unity, etc., to ideas of sensation and reflection? The implication in the literature that he is not *clearly* aware of this problem is amply borne out by a study of his published writings. Is there, however, some *half*-awareness? The evidence on which the exponents of this view rely is linguistic, and is based especially on his use of the term "suggestion."[13] The question is thus one as to his use of language, and can only be answered by a study of that language. We shall accordingly first make out a list of all the cases explicitly regarded by Locke as "suggested." We shall then, with reference to each case, consider also the other expressions employed by Locke,

[11] *Essay*, I, pp. lxxxvii, xcvii, cii, 191. Cf. also von Benoit, *op. cit.* 13, 14, 16-21; Köhler, *op. cit.* 17-18.

[12] Fraser does not himself regard pleasure and pain as especially "suggested." In his note on the meaning of "suggestion" (*Essay*, I, p. 145, n. 2), he gives references which omit pleasure and pain, and include existence, unity, etc.

[13] Some weight is also laid on expressions which indicate that these ideas are "carried into the mind along with" ideas of sense, etc. Cf. Webb, *op. cit.* 79-80, von Hertling, *op. cit.* 27, etc.

with a view to discovering whether the term "suggested" is typical or accidental. Finally we shall compare with our results his use of language in cases to which the term is not applied. We shall then be in a position to come to a definite conclusion as to the sense in which he intends the term to be understood.

A complete list of the terms to which Locke refers explicitly as suggested to the understanding contains instances from the following groups:— simple ideas, including simple ideas of one sense,[14] simple ideas of divers senses,[15] simple ideas of reflection,[16] simple ideas of both sensation and reflection;[17] complex ideas, including simple modes,[18] and the essences of mixed modes.[19] The list does not include ideas of substances or relations.

We can now proceed to ask whether the expression "suggested" is typical or accidental for these various groups. In the group of simple ideas taken generally, the typical expression is that such ideas are furnished[20] or offered[21] to the understanding. There is a secondary type of expression in regard to sense-ideas, viz., that they are "obtruded" on the mind, and that the mind is "forced" to receive them.[22] All other terms appear to be colorless and unimportant.[23] If now by the term "suggested" we understand that the senses (external and internal) provide merely an occasion or stimulus, upon which the mind reacts with an idea thus suggested to it, there is little in Locke's language to indicate that such a viewpoint is commonly in his mind in connection with simple ideas. In fact, an unbiased consideration of the evidence shows a certain uniformity in his attitude which would seem to exclude such an interpretation as anything more than accidental; and we must logically conclude that the term is here used only as a synonym for the more frequent "furnished." It is not meant that any creative function of mind is called into play.[24]

[14] For example, color, softness, warmth, coldness, hardness, smells, and tastes: II ii 1-2, pp. 144-45; cf. II xix 1, p. 299.

[15] For example, motion (II ii 1, p. 144).

[16] II ii 2, p. 145.

[17] For example, pleasure, pain, power, existence, unity, succession: II iii 1, p. 148; vii 7, 9, p. 163; xvi 1, p. 270.

[18] For example, infinite, angles of a triangle (II xvii 13, p. 286; Works IV, p. 59). The latter passage refers primarily to "ideas used in demonstration," but as demonstrative science deals only with modes (cf. Hartenstein, *op. cit.* 195-96), and the only instance given is mathematical, i.e., a simple mode, the case is classed under the heading of "simple modes."

[19] III v 3, pp. 43-44.

[20] II i 2, 4-7, 20, 22, pp. 122, 123-26, 139, 140; cf. II ii 2, p. 145.

[21] Including "supplied" and "afforded": II i 2, 4, 7, 8, 24, pp. 122, 124, 126, 127.

[22] II i 6, 25, pp. 126, 143.

[23] For example, produced, imprinted, conveyed into the mind, received. Such metaphors serve merely to emphasise the "passivity" of mind, or our inability to make, alter, or destroy, simple ideas. This is, of course, not inconsistent with selection by attention (cf. von Benoit, *op. cit.* 13; Köhler, *op. cit.* 17-18, 21-23, 26-27; Fraser 1:212).

[24] The evidence considered is drawn only from the strictly relevant chapters. Fraser (p. 145) attempts to distinguish sharply between "furnished" and "suggested"; but the whole tenor of the passage, as well as all ten examples given in the text, is against his Berkleian interpretation.

If we turn to the group of simple ideas of both sensation and reflection, we find that for pleasure and pain two expressions are typical. These "different constitutions of the mind" are most frequently said to be "caused" or "produced,"[25] while in a secondary sense they are "annexed to" ideas of sensation and reflection.[26] The latter expression has received the greater emphasis in the literature, but the way of regarding these ideas which is dominant for Locke, is undoubtedly the first. Pleasure and pain are "produced" in us, in accordance with natural law, either by external objects, or by our own thoughts. The fact that certain ideas produce greater pleasure than others, leads Locke to a consideration which is secondary, an extension of the first, namely, that this production of pleasure and pain depends on the will of the Deity. It is God who has "annexed to" certain ideas especial pleasures and pains, in order that we may live a useful life here below, and also be led into a knowledge and veneration of Him.[27] If, then, the term "suggested" is intended to apply to pleasure and pain,[28] it can not be understood in the idealistic sense, but is a mere synonym for "produced" in the mind.

For the idea of power, the typical mode of expression is that it is furnished or given, and that we receive it in sensation and reflection.[29] There is nothing to indicate that any idealistic sense of the word "suggested" is in Locke's mind here, and we must accordingly conclude that, as used in connection with the idea of power, the term is equivalent to "furnished" or "given"—a sense intended also, it would seem, in the case of the idea of existence, where there is, however, no one verbal phrase which can be called distinctly typical. The most frequently occurring expressions point unmistakably in one and the same direction, and appear to be synonyms for "furnished" or "given."[30]

The idea of unity is four times said to be "suggested." Objects or thoughts are four times said to "bring this idea along with" them. At other times the idea is said to "make itself way" or "convey itself" into the mind.[31] What are we to regard here as typical? Three of the four occasions on which the term "suggested" is used have already been considered, and have been judged equivalent to "produced" or "furnished." A similar sense is probably intended in the phrase "convey itself into":

[25] II vii 2, 4, pp. 160-62; xx 2-5, 7, 11, 13-15, 17, 18, pp. 303-7.

[26] II vii 2-6, pp. 160-62; xx 1, 6, 14, pp. 302, 304-6.

[27] II vii 2-6, pp. 160-62.

[28] The application is implied in II iii 1, p. 148, but Fraser's notes consistently indicate that only existence, unity, etc., are (in his opinion) intended. Webb and Manly, however, consider the application valid.

[29] II vii 8, p. 163; xxi 4, pp. 311-13.

[30] For example, we "perceive" or "have knowledge of" existence; objects "give us notice" or "information" of their existence: IV ix 2-3, pp. 304-5; xi 1-3, pp. 325-28, etc. Cf. Green, *op. cit.* sec. 30, *init.*

[31] II vii 1, 7, pp. 160, 163; xiii 26, p. 235; xvi 1, p. 270; cf. iii 1, p. 148.

and that ideas of objects, etc., "bring along with them" this idea, would seem also to preclude any creative function of mind. So that here also, the term appears synonymous with "furnished" or "given."

Finally, the phrases applied to the idea of succession, though no one of them can be called definitely typical, similarly appear to preclude any idealistic interpretation of the word "suggested,"[32] which here too, may be regarded as equivalent to "furnished." So that, if we wish to summarise our results in regard to simple ideas, we must conclude that the term "suggested" is relatively colorless, and is intended to convey the same notion as the more common expression, "produced" or "furnished."

Let us turn to the complex ideas. Here, if anywhere, we should expect to find the term employed in a distinctly idealistic sense. For here the mind is "active." Modes, for instance, are man-made, mental constructions, based indeed ultimately upon sensory elements, but multiplied in imagination far beyond actual sense-experience; relations, again, "terminate in" simple ideas, but can be carried to an almost infinite complexity by the freely comparing mind; while the support-element which constitutes the kernel of substances is never experienced at all; and finally, the idea of God, with its rational "demonstration," carries us far beyond the bounds of even possible sense-experience. Here, then, if the view we find in the literature is correct, we should expect to find the term used almost consciously by Locke.[33]

But what *do* we find? Relations, substances, the idea of God,—these are not once referred to as "suggested"; and in the case of the two simple modes to which the term *is* applied, it is not distinguished by Locke from "produced" or "furnished." In the case of the idea of infinite, Locke does seem to be describing what might, perhaps not altogether unfairly, be interpreted as an unfolding of the latent constitution of the mind.[34] But a careful reading shows that his attention is fixed here, as ever, on the "material" from which the idea is derived—in this case, the addition of units—and the idealism which to Fraser seems so clearly implied is nowhere taken into the focus of consciousness.[35] Where the question *is*

[32] For example, we perceive or observe, get or come by, the idea; it is offered and furnished to us, or produced in us. II vii 9, p. 163; xiv 3-4, 6-8, 10, 16, pp. 241-43, 245.

[33] For the interpretation contained in this paragraph, which is, of course, in the sense of the literature, and not of chapter v of this study,—cf. A. Riehl, *op. cit.* 23, 52-53; Falckenberg, *op. cit.* 117, 122, 127; Geil, Die Gottesidee bei Locke . . . *Archiv f. Gesch. d. Phil.*, 1889-1890. 3:587-88; von Hertling, *op. cit.* 17, 21-23, 27, 53-58, etc.; W. Freytag, *Die Substanzenlehre Lockes.* Halle. 1898. p. 22.

[34] II xvii 2-3, 6-8, pp. 277-78, 280-82, etc. Cf. Riehl, *op. cit.* 50.

[35] Cf. Falckenberg, *op. cit.* 111; Riehl, *op. cit.* 61. So also in the case of the mathematical demonstrations, it is the *diagram* which "suggests"—i.e., furnishes—the "intermediate ideas" (Works IV, p. 59; cf. *Essay*, III v 3, p. 44).

definitely raised—perhaps most forcibly in the *Examination of Malebranche*—the answer is an absolute *nescio*.[35] The only possible conclusion appears to be, that the term "suggestion" contains no subtle flavor of idealism. It is not employed as an index-finger pointing to the pleasant pathways of Berkleianism, but is simply one of many expressions used by Locke to accommodate his thought to the comprehension of the "vulgar." Furnished, produced, given, occasioned, caused, suggested,—all are but variations on the one theme, expressions of one and the same thought.

What then *is* this thought? We have seen what "suggestion" is *not*. It remains to ask what it *is*. Locke is no idealist. Is he, then, a realist? No. Still less is he a "sensualist." What then *is* he? His central thought belongs to all and none of these schools: for it is practical. Life and the needs of life, both here and hereafter—these occupy for him the center of interest, and it is to these that he appeals for a solution of his theoretical problems also. His prudence and piety are empirical, not certain, tolerant rather than dogmatic, and aim not at strict knowledge, but at reasonable faith. It is this faith which furnishes the connecting link between object and idea, and fills out with meaning what would otherwise be a hopeless riddle; and if "suggestion" has any specific meaning, it is this: viz., that it expresses the wisdom and modesty of Locke's thought, which shrinks from the "necessities" and "certainties" of abstract speculation, and remains content with the concrete hints and suggestions furnished by experience.

[35] *Ex. Malebr. passim.*

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STUDIES IN THE SOCIAL SCIENCES NUMBER 13

THE LIBRARIES OF THE AMERICAN STATE AND NATIONAL INSTITUTIONS FOR DEFECTIVES, DEPENDENTS, AND DELINQUENTS

BY

FLORENCE RISING CURTIS, M.A.

MINNEAPOLIS
Bulletin of the University of Minnesota
September 1918

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PREFACE

In publishing Miss Curtis' study of institution libraries, I am sure the University of Minnesota is rendering a notable service not only to libraries and public institutions, but also to the general public which is still shockingly ignorant of how its institutions are really administered. This little volume stands unique in its field, as it brings together a large amount of first-hand material secured through original research, in addition to collating scattered papers on single phases of the problem. It administers a definitive refutation to the popular fallacy that institution libraries are a fad and that inmates of such institutions can not and will not make use of them. I confess to having been surprised at finding how many institutions looked upon their libraries as integral parts of their work. Any undue elation was checked, however, by observing how uneven the library equipment runs and how far we still have to go before it becomes really adequate in many places.

The popularizing of institutions as the result of their gradual coming under state control, and the consequent raising of standards of care, has meant that they house an increasing number of superior patients, capable of appreciating means of culture and refinement. Hence the tendency to carry over into the institution the function of books as part of normal free cultivated life. But more than that: books and music have been demonstrated to possess therapeutic value both in preventive and reëducative work for the handicapped mentally or physically. Their value for the convalescent has long been utilized, as in the tuberculosis sanatoria. And as preventives of nervous disorders they have been scarcely less popular. But only recently has their value as a preventive of incipient dementia or as a restorative in certain cases of insanity been recognized.

Add to these facts the further discovery that good books aid in the morale and discipline of an institution for juvenile delinquents; that these delinquents are voracious readers; that the habit of reading creates a "diversion" from less constructive habits; that in reformatories the library plays the rôle of continuation school; that in the care and education of the feeble-minded books frequently are the most potent means for focusing and energizing a sluggish mind; and you get some idea of how significant and practical this problem really is.

The free population of this country with its more or less irresponsible attitude toward the public library would do well to follow the example of the prisoner or the insane or the feeble-minded; for Miss Curtis, herself instructor in a university library school, shows how inmates not only do not destroy their books, but even conserve them as their most precious treasures. And when it comes to comparative use of library facilities the

institution records are astounding. The annual turnover per volume in some institutions runs as high as 29 issuances, and 15 is quite common. The ordinary city must hump itself to approach within siege-gun shot of such a record.

The war has added its confirmation of these facts. In the light of them we understand perhaps more clearly why the American Library Association has been making its "drive" for books and library staffs in army training camps. Many of the same conditions are common to the camp and to the institution.

Miss Curtis in making this study has done pioneer service to the cause of mental therapeutics and has added a notable chapter to the library's record as an agency for practical social welfare. It is one more straw indicating how the current of thought flows away from conceiving the library as a jewel box to be kept under lock and key, and toward a more dynamic faith in its powers as an institution for all the children of all the people. Who will, therefore, dare hereafter to call such special libraries fads or seek to obtain a charitable glow by unloading upon soldiers or upon state institutions moldy books of sermons, trashy novels, antiquated catalogues and fashion books, or other such publishers' junk?

ARTHUR J. TODD

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THE LIBRARIES OF THE AMERICAN STATE AND NATIONAL INSTITUTIONS FOR DEFECTIVES, DEPENDENTS, AND DELINQUENTS

CHAPTER I

STATE AND NATIONAL INSTITUTIONS

1. Historical Sketch

At the beginning of the nineteenth century, there were in the United States, four state institutions for dependents, defectives, and delinquents: the New York penitentiary, established in 1797; that of Massachusetts, established in 1785; and the two institutions of Virginia, the hospital for the insane, and the prison, founded in 1763 and 1797 respectively. Previous to this time, the problem of state custodial care had not assumed serious proportions. The settlements of the new world attracted people of mental and physical vigor, and the hard conditions of pioneer life weeded out the physically weak. The abundance of healthy outdoor work and the ready justice of the frontier helped to settle the question of criminality; life was not so differentiated, master and servant, employer and wage earner, shared more nearly the same work and the same conditions of health and comfort. Yet, even in colonial times, there was a constantly increasing number of people who were a menace to others. Vagabonds and malefactors in large numbers were transported from Great Britain and Ireland to the colonies. The Indian raids, with their trail of burned homesteads, and the epidemics which swept the communities, added to the number of children who must be adopted or taken as indentured helpers and the homeless men and women who became vagrants. The care of the insane, always a heavy burden upon the family, was early found to be a community problem. Connecticut in 1750 provided for the public relief of the indigent and homeless insane. The legal code of the day did not prevent crime, and local workhouses and jails were necessary. After the Revolution there were injured soldiers, to whom the state gave aid, and the care of the aged and destitute became more and more a public charge. The second decade of the century saw the beginning of the state's instruction of the deaf, at Hartford, Connecticut, in 1817. The first public school for the blind was not opened until 1837, in Ohio. New York City, in 1825, established a reformatory for juvenile delinquents; the first of these institutions under state control was that at Westborough, Massachusetts, opened in 1847, and to Ohio belongs the credit of initiating the movement for industrial schools, in 1854. A state institution for the

feeble-minded was founded in New York in 1851; Ohio established in 1892 a separate institution for epileptics.

By the close of the Civil War, most of the states had provided for the increasing number of the population who were in need of community aid. Many of the institutions founded in this period were homes for soldiers and their wives and widows. The state public school at Monson, Massachusetts, was the first public institution for dependent children. The Elmira reformatory, established in 1876, made provision for the young or first-time offender of adult age; this was followed, in 1897, by the Reformatory for Women at South Framingham, Massachusetts. In 1884, the success of the Trudeau sanatorium stimulated state provision for those suffering from tuberculosis. The most recent types of institutions have provided for inebriates and for vagrants. At the close of the twelfth decade of the nation, there were over six hundred institutions for dependents, defectives, and delinquents, supported wholly or in part by the state or national governments.

2. The Problem of Employment, Education, and Recreation

With this growth in the number of institutions, and their specialization, a new attitude toward the wards of the state developed, not only on the part of those to whose care they were committed, but of the general community as well. It is just one hundred years since Esquirol described the condition of the insane in Europe,—suffering, neglected, loaded with chains, and cruelly punished; to-day a considerable number of the insane leave the hospitals recovered or improved, and most of those remaining can be usefully and happily employed. Much attention has been given to the education and industrial training of the mental defectives and their possibilities of productive work. The barriers which shut the blind and the deaf from communication with their fellow beings have been in large measure removed, and these classes of people are able to take their places as self-supporting members of society. Delinquency has been recognized as a problem for which society is to a great degree responsible, and provision has been made for further training and new opportunities for young offenders. Even the doctrine of retributive justice for the criminal has given way to the provisions for parole and wage payments, and the ameliorative influences which mark the new penology. As the care of the inmates of the state institution became more and more a matter of public attention and concern, there was a growing conviction that the state had not done its full duty when, comfortably housed and humanely treated, they were removed from the communities to which they were either a danger or a distress. It was recognized that remedial custodial care was of great value to society, lessening both the expense and the danger which

must follow if neglect of this portion of the population led to violence, crime, and vice, and minimizing the opportunities for the direct transmission of mental defect. To those who are physically and mentally ill, institutional care now offers the hope of cure or of amelioration; for those whose conduct has been antisocial there may be the opportunity of reformation; and for all, in some measure, there is provided employment, recreation, and some form of training and education.

The institutions have found that these provisions for employment, recreation, and scholastic and industrial training have a direct value quite distinct from any financial returns. Discipline is more easily maintained and there are fewer administrative problems; it is easier to secure competent employees of a high grade; and the public has more confidence in the institution and is more willing to contribute to its financial support. There is, in addition, in the institutions for mental defect and mental disease, a possibility for scientific study along the lines of psychology and therapeutics. The institutional library has, in some respects, advantages which are not shared by any other department. No expensive apparatus or equipment is required; the books are easily portable, and may be enjoyed in solitude or read aloud while a group is occupied; they afford diversion during the leisure time which would otherwise be spent in idleness; they help to provide the educational training of which all stand in need, and make for moral health through the stimulation which comes from wholesome mental imagery. These libraries are no longer an experiment; they play a recognized part in the successful administration of many of the most progressive institutions of the country. The superintendents who have had the benefit of up-to-date, well-chosen, and efficiently administered libraries, appreciate their importance and provide as amply as may be possible for their growth. Since the problems of the institutions differ widely, it may be well to consider the place of the library in each type and its value for different classes of readers.

CHAPTER II

THE PLACE OF THE LIBRARY IN THE INSTITUTION

1. The Insane Hospital

The advocate of organized libraries for the patients of the insane hospitals will meet several objections from those who have not given the subject careful attention. These objections are usually three: first, that the insane through the nature of their affliction are mentally incapable of receiving any real benefit from books; secondly, that so many are disturbed and violent that books will not be safe in their hands; and, thirdly, that a library is an unnecessary fad, purchased at considerable expense for those whose comfort and well-being are in no way dependent on its use.

In answering the first objection as to the deficient mentality of the insane, it is necessary to consider somewhat the nature of their disease and the extent to which it impairs the mental faculties. Insanity, we are told, is a disease due to lesions of the brain, and marked by mental processes which are below normal or deviate from normal; intelligence is never wholly gone, sometimes lacking in a very slight degree, nor are all faculties affected evenly, as the disease may show itself most either in the intelligence, the emotions, the will, or the moral sense.[1] Nor are all those admitted to the insane hospitals largely illiterate or deficient in their education. The answers to a questionnaire, sent to these institutions in 1916, show that a large majority of the patients have completed the sixth grade of the elementary school. In a special report of the United States census, the number of the insane ten years of age and older, enumerated on January 1, 1910, was given as 159,096. Of these 75.8 per cent were literate, 19.2 per cent were illiterate, the literacy of 5 per cent was unknown; of those admitted in 1910, 84.3 per cent were literate, 11.4 per cent were illiterate, the literacy of 4.3 per cent was unknown.[2]

It is encouraging to note the large number of patients who are eventually sufficiently recovered to leave the institutions. The census report gives the number discharged from hospitals in 1910 as 29,304, of these 24,241, or 82.7 per cent, went out as recovered or improved. In commenting upon the fact that the age of those discharged was less than that of those admitted, the report says, "This must mean that those discharged come largely from the younger inmates . . . it also indicates that the persons discharged have usually been in hospitals a comparatively short

[1] Dr. Robert M. Phelps, *Insanity and the Care of the Insane.* 1916.

[2] *United States Census Special Report on the Insane,* 45, 122. 1910.

time and that the recovery or improvement in the condition of the insane generally takes place within a short time after admission or not at all."[3]

Dr. Thomas W. Salmon, of the United States Health Service, stated at the New York Mental Hygiene Conference of 1912, "The reports of the New York State Hospitals show that in nearly 90 per cent of the cases who recovered during the year, the duration of the mental diseases had been less than a year before admission."[4] The biennial report of the State Hospital for the Insane at Rochester, Minnesota, for 1914-16 says, "The percentage of recoveries on admissions for this biennial period is 21.6 per cent . . . The average time in the hospital of those who recovered was less than six months. It is very forcibly impressed upon us that most of the recoveries occur during the first year, emphasizing the importance of care and treatment. . . . The average time under treatment of the recovered voluntary cases was a little over two months."[5]

A number of the cases listed as recoveries include voluntary cases for whom many states have made provision; those who fear a mental breakdown may go to a state hospital for expert care, without being committed to the institution. The success of this provision is shown by the increasing number who avail themselves of it. Dr. L. V. Briggs, secretary of the Massachusetts State Board of Insanity, reported that in 1911 there were 359 voluntary admissions to their state hospitals, and, in 1915, 963 such admissions.[6] In the states where separate detention hospital buildings have been provided, incoming patients are placed there for observation and special treatment. These buildings have the advantage of better equipment, a specialized diet, and more expert nursing; those for whom there is still the hope that they may regain their mental health thus have the advantage of early diagnosis and individual care at a time when the chances for recovery are most favorable. Dr. Krafft-Ebing, of the University of Vienna, emphasizes the importance of such preventive therapeutics

"In the psychic treatment of the insane, two phases of the disease must be distinguished with the greatest clearness, the period of origin and the acme, and the change, either to recovery or dementia. During the development and at the height of the disease the test of mental treatment is properly negative—the removal of injurious mental influences . . . The fundamental necessity in all mental therapy at this stage of the disease is to place the patient in the greatest possible mental quietude . . . In the period when the disease changes for better or worse psychic therapy has an active part to play. The art of the alienist is here displayed in his understanding of the individuality of the patient, to lead up to the restoration of the former mental personality or at least to save all that is possible out of the mental wreck. Innumerable patients recover quickly and spontaneously when improvement is once established, and the well-regulated hospital for the insane, with its library,

[3] *Ibid.*, 60.

[4] New York Mental Hygiene Conference, *Proceedings*, 1912, 130.

[5] Minnesota State Board of Control, *Biennial Report*, 1914-16, 103.

[6] L. V. Briggs, *Boston Medical and Surgical Journal* 174:703-8. May 18, 1916.

its music, its amusement, parks, and means of employment has only to place these means at the disposal of the patients, with a reasonable regulation of their employment. Innumerable unfortunates, who, if left to themselves, would degenerate into . . . complete dementia, the regulations of a hospital for the insane keep at a useful mental level and make the employment of the mental powers that remain useful."[7]

A type of insanity which is represented in a large per cent of the hospital population is the manic-depressive. The admission of the manic-depressive cases to the Minnesota state hospitals for the biennium of 1914-16, were: Fergus Falls 23.9 per cent, Rochester 40.9 per cent, St. Peter 23 per cent.[8] The famous alienist Kraepelin, of Heidelberg, says, "The best known constitutional disorders, such as hysteria, manic-depressive insanity, and psychopathic states, do not lead to a mental deterioration, but to a periodic recurrence of symptoms, with intervals of perfect health which are often long."[9] "This is a great reading class, as their mentality is not affected," says Miss Jones, librarian of the McLean Hospital at Waverley, Massachusetts, "they read for relief from depression and to take their minds off themselves."[10]

The form of mental disease called dementia praecox, the insanity of the adolescent and the young adult, is the cause of a large number of the yearly admissions to the institutions. Dr. August M. Hoch, director of the psychiatric institute of the New York State Hospital, addressing the New York Mental Hygiene Conference in 1912, said: "The yearly admissions to our hospitals, which belong to this general group (dementia praecox) represent nearly a quarter of all the cases admitted, and . . . it is a conservative estimate when we say that the New York hospitals for the insane, at the present moment, take care of 15,000 such patients, that is, half the inmates of all the institutions."[11]

Dr. Henry R. Stedman, of the Bournewood Hospital, Brookline, Massachusetts, gives similar figures. He says:

"It is safe to say that the majority of the 14,746 inmates of the Massachusetts state and private hospitals for the insane are cases—mostly chronic—whose disease began when they were young . . . Of the 3,264 new cases of mental disease admitted to the Massachusetts hospitals in 1915, 804, or over 21 per cent, were suffering from dementia praecox . . . and the allied conditions of adolescence . . . This yearly addition of cases of dementia praecox, most of whom become chronic but remain physically well, causes them to accumulate until they soon form the majority of the inmates of our state hospitals. They represent one third more admissions than the combined totals of all patients whose mental condition is due to either alcohol or syphilis, causes which are very rare in producing this form of mental

[7] Richard von Krafft-Ebing, *Text-Book of Insanity*, 272-74.

[8] Minnesota State Board of Control, *Biennial Report*, 1914-16, 96, 112, 137.

[9] Quoted by Henry R. Stedman, *Boston Medical and Surgical Journal* 175:695-703. November 16, 1916.

[10] Edith Kathleen Jones, Letter of April 30, 1917.

[11] New York Mental Hygiene Conference, *Proceedings*, 1912, 208.

disease. Of all the classified forms of insanity, moreover, dementia praecox claims by far the greatest number of victims . . . This mental condition should not be confounded with mental defect or feeble-mindedness proper . . . The mental defective, about whom wide public interest fortunately has at last been awakened, is one who had little or no mind to start with—who has been idiotic or imbecile from birth or infancy. On the contrary, most cases of dementia praecox enjoy, up to the time of their break-down, apparently sound and normal minds. A striking fact is the frequency with which the disease attacks adolescents of marked intelligence and promise. A German authority reports that large numbers of such patients are school masters, the sons of school masters and theologians. Statistics on this point give these figures: 27 per cent men and 21 per cent women had average intelligence before their mental break-down; 55 per cent men and 66 per cent women had good and even remarkable intelligence; 18 per cent men and 13 per cent women were below the average intelligence, but were not mentally defective."[12]

The reports of the Minnesota state hospitals for the biennial period of 1914-16 give the following percentages of the dementia praecox cases among the admissions for the period: Fergus Falls, 27 per cent; Rochester, 13.6 per cent; St. Peter, 32 per cent.[13] These patients, unless their disease progresses rapidly, fall into the class which the modern hospital activity along the lines of occupational and educational interests may save from complete dementia. Many of the hospitals have two or more instructors in handicrafts and the games and sense training classes of the kindergarten. There are, in addition, the library, and special industrial rooms and wards where metal and leather work, pottery, rug making, and basketry are taught, as well as sewing, knitting, crocheting, and embroidery. In 1915, eight hospitals in Massachusetts included industrial courses in the work of the nurses' training classes. Dr. L. V. Briggs, of that state, comments upon the value of the industrial work:

"Occupation is more and more a feature in a therapeutic and curative way, and teachers are being employed to instruct many patients in arts and crafts and industrial work, so that, instead of sitting on benches and around the dormitories and wards day after day, doing nothing, they are interested in some occupation which will also interest their neighbors, and instead of becoming quarrelsome and getting tired and cross with nothing to do, to-day in the ward where the patients are occupied . . . the whole atmosphere of the ward is changed from one of depression to one of more or less cheerfulness. These teachers are also instructing the nurses, and the Board has in mind the purpose of this instruction which is that the nurses shall become teachers and helpers to the patients rather than keepers and over-seers."[14]

There is a movement to-day toward the reëducation of the insane, and trained kindergarteners are employed in some of the hospitals. Dr. Allen McLane Hamilton, the well-known alienist, was much impressed by the school of the Richmond District Asylum near Dublin, which he visited in 1880; he attempted to introduce such classes at Poughkeepsie, but was

[12] Henry R. Stedman, *Boston Medical and Surgical Journal* 175:695-703. November 16, 1916.

[13] Minnesota State Board of Control, *Biennial Report*, 1914-16, 96, 112, 137.

[14] L. V. Briggs, *Boston Medical and Surgical Journal* 174:703-8. May 18, 1916.

unable to carry them on, owing to a lack of support.[15] Dr. W. A. Bryan, of the state hospital at Cherokee, Iowa, has recently conducted a valuable experiment in the reëducation of some of the most untidy and demented patients.[16] The nature study classes have been a great success in the hospitals, as a means of training the powers of observation, and as affording the opportunity of beneficial exercise out of doors. The books on birds, flowers, and trees are in constant demand and, in at least one hospital, the librarian is in charge of the class. Dr. Robert Howland Chase, in his book, *Mental Medicine and Nursing*, considers this is a subject on which the nurses should be well informed. He says:

"Nature study classes may be found to-day in all hospitals, usually under the charge of an experienced teacher. The subject matter takes a wide range and the lessons are made as varied and attractive as the teacher's skill can make them . . . The subject is inexhaustible and when the work, or rather play, is entered into with zeal and relish there is no end to the good that may be reached."[17]

We have, then, in the institutions for mental disease a large number of patients who will, in a short time, go out as restored or much improved; an increasing number of these are voluntary patients who have availed themselves of the opportunity of preventive measures to avoid a mental breakdown. Conservative estimates of the chronic dementia praecox cases place them at about half of the population of these institutions; the industrial work and the educational use of books, nature study, materials, and games, serve to keep these at what Krafft-Ebing calls "a useful mental level."

If we consider in addition that probably one fifth of all admissions are cases of manic-depressive insanity, which causes only periodic mental disturbance, there would seem to be ground for the assertion that the inmates of the insane hospitals are mentally capable of receiving both enjoyment and benefit from books.

To those who are familiar with the modern hospital for the insane, the fear that many of the books provided for the institution will be destroyed by the patients is known to have no foundation in fact. Dr. Robert M. Phelps, superintendent of the St. Peter, Minnesota, state hospital, says:

"The very first institutions were truly 'madhouses,' as they were called, because only the raving and extreme cases were taken. We now may not have in the house one raving case out of fifty to one hundred people. During the last twenty-five years, more and more of quiet cases have been admitted, until half our incoming cases are intelligent enough to give us their past history with fair clearness and 90 per cent have fair general behavior, although of course, not that proportion are reliable in behavior."[18]

[15] Allen McLane Hamilton, *Recollections of an Alienist*, 394-96.

[16] W. A. Bryan, *Iowa Bulletin of State Institutions* 19:91-97. January, 1917.

[17] Robert H. Chase, *Mental Medicine and Nursing*, 198.

[18] Minnesota State Board of Control, *Biennial Report*, 1914-16, 119.

The best evidence in regard to the care of the books is given by Miss Edith Kathleen Jones, for thirteen years librarian at the McLean Hospital of Waverley, Massachusetts. In a paper read before the American Library Association in 1913, she said:

"Unless they are very ill and destructive, books are treated as carefully by the insane as by the users of public libraries. Last year, out of 8,686 volumes taken out by patients and nurses, only nine were lost or destroyed and of these only two were charged to patients. It is the proud boast of one of our head nurses, who has under him the next to the most violent and destructive ward on the men's side, that he has had out for his patients over 450 volumes in the last two years and has not lost or had mutilated one single book."[19]

Later, in 1915, she wrote:

"One of the head nurses at McLean Hospital . . . has had charge of the ward for sicker and more destructive men, and at first it was not thought wise to send any books in the least valuable to that ward. This nurse, however, offered to assume all responsibility, and so well have his plans worked out, that in six years he has lost or had mutilated only three books. A lover of books himself, he goes to the library once a week, returns books due, and takes out about a dozen others—travel, pictures, outdoor books, a little fiction, . . . and distributes them to his waiting patients."[20]

Granted that the insane are mentally capable of reading, and that most of the books provided will not be mistreated or destroyed, the more important question still remains, as to whether the money spent for the maintenance and supervision of the library is justified. These institutions are usually overcrowded, none of them have an appropriation in excess of their actual needs, and many of them are seriously hampered for funds; each dollar must be spent to the best advantage. As the institutions of Iowa have had a ten years' trial of organized libraries under state supervision, the opinions of the medical superintendents of that state will be of value. In answer to a questionnaire sent to them in March 1917, they replied as follows:

"Would say that reading rooms are quite necessary in order to get the patients to read as much as they should. About three rooms in a hospital of this size (1,100 beds) would be sufficient. A better plan, I think, would be to have the library and reading rooms in a Recreation Building . . . Possibly general reading helps the insane, but feel as though it did not do any more than any other diversion. The life of the chronic insane is of course much happier on account of library books and periodicals."[21]

"My personal view is, that the time spent in reading, especially by our more intelligent patients, would be in excess of that for people outside of equal intelligence, for the reason that our people have so much more time to devote to reading than folks outside, with other work and interests. A very large number of our people

[19] Edith Kathleen Jones, *American Library Association Bulletin* 6:320-24. July, 1912.

[20] Edith Kathleen Jones, *American Journal of Insanity* 72:297-303. October, 1913.

[21] Dr. George Donohue, superintendent of Cherokee State Hospital. Letter of April 9, 1917.

would be incapable of profiting by library facilities. It is the aim of the nurses and the librarian to get as many people as possible interested in the library, as well as in other things; with some success in some instances, and with others, very little if any. The library is one of the first means to interest the patient after the actively disturbed period of the disorder has passed, and the intensity of the trouble has subsided, and he remains in an exhausted and listless mental condition; wherein, if left to himself, he would further deteriorate mentally. It is then our aim to waken interest in various ways, reading, music, entertainments, and occupations of various kinds, anything of a helpful nature to attract and hold the attention of the patient, so that his mental activities may be stimulated and encouraged.

"The suitable and well-directed library is certainly a help and benefit. Just how much, it is difficult to estimate. There is some demand for books other than fiction, by a small number of patients whose reading habits have been formed prior to admission here, and now and then an individual may be found who has time, and will become interested in reading other than fiction. In the matter of reëducation the library plays an important rôle."[22]

Results of libraries in these institutions: "Reëducation of demented patients. Prevention of dementia in patients that might otherwise dement. Retardation of dementia in those who do dement. Exerts a moral as well as a curative effect on the patients, improving their deportment. Increases the scientific knowledge of the personnel."[23]

Results of libraries in these institutions: "Good for discipline, diversion, entertainment, etc." Demand for books other than fiction: "History, mechanical, detective stories, etc."[24]

The trained librarian who is able to compare the use of books by the insane with the reading done by people of normal mentality, can give testimony based on actual experience. Miss Jones, of the McLean Hospital, has said:

"The value of a well selected library can hardly be over-estimated as a therapeutic agent. I do not mean by this that a cure can be affected simply by reading the right books, that of course is absurd. But it is a fact recognized by all psychiatrists, and at the basis of the treatment of the insane in all hospitals to-day, that whatever takes a patient's mind off himself and his own troubles and directs his thoughts in other and more wholesome channels, contributes to his recovery. And when amusements pall, handicrafts tire, golf and tennis are too strenuous, books and pictures will almost always help. It is for this reason that we have to be so careful of the kind of reading, especially of fiction, which we put into the hands of the patients. They must be wholesome stories, anything dealing with suicide or insanity is strictly tabu, also stories which are morbid or would be apt to arouse a morbid train of thought. With these exceptions, the insane want and should have the same books which you and I read. Moreover . . . the insane are not imbeciles and they are not children, and they resent when they are treated as such, just as much as you and I would . . . they do not want kindergarten stories, they are as interested in what is going on in the world and the keeping up with the times as any one."[25]

[22] Dr. Max E. Witte, superintendent of Clarinda State Hospital. Letter of April 4, 1917.

[23] Dr. W. P. Crumbacker, superintendent of Independence State Hospital. Letter of April 5, 1917.

[24] Dr. C. F. Applegate, superintendent of Mt. Pleasant State Hospital. Letter of April 18, 1917.

[25] Edith Kathleen Jones, *American Library Association Bulletin* 6:322. 1912.

Miss Nellie Williams, librarian for state institutions in Nebraska, with headquarters in Lincoln, has made a study of the value of the library in the hospital in that city. She says:

"When I began my work, the question in my mind was as to how responsive the patients would be, of what actual help the books would become, with most of the burden of doubt on the side of their ability and desire to read. Knowing so little of the work among the insane, I began giving some individual attention to them that I might observe actual results. Having no reading room or hospital librarian at this time, I began reading aloud once a week, on both the men's and women's wards. This proved one of the most interesting experiences I ever enjoyed. I was speedily convinced that much could be done, I found the patients to be responsive and appreciative in the extreme, and the degree of their retentiveness was a surprise to me. I find them to remember the characters in a story and the last events of a day's reading much better than I myself do when I try to keep in mind from November to December the happenings of a serial.

"I find them touched by allusions which recall home life, when they will relate incidents of their earlier years. They appreciate a story with a setting familiar to them or to their antecedents. They respond to both the humor and pathos of my selections. Indeed, I am frequently astonished at the alertness of mind shown by some in their quick grasp of a rather subtle bit of humor. They are always touched by stories of child-life, and equally suspicious of stories *for* children. They are appreciative of everything you do for them—exceedingly so.

"They have their favorite authors and surprise me by the rapid rate at which they rattle off titles of authors whose appeal is strongest for them. Some are not satisfied until they have diligently exhausted the entire supply of an author, and I have often to persuade them to try some other as a substitute.

"I have been pleased that they do not confine themselves to fiction. They will listen to poetry as long as you will read. Some of them will read for themselves travel, biography, and history, though naturally this number is limited. They have a strong love for flowers and birds and some have gratified me by an interest in the nature study books which I have been adding to the libraries. The mental status of our hospital patients is low, but in spite of mental or educational lack, we have not lowered our standard in book buying and it seems to me all the more evidence of what can be done, that they read and enjoy the type of books provided.

"At the one hospital where we maintain a reading room in connection with the library, we have found both men and women eager to go. They enjoy the magazines, they are quiet and responsive. I hope to have this same plan carried out in our other hospitals for the insane."[26]

The most convincing evidence in regard to the hospital libraries comes to the supervising librarians in letters from the patients. The report of the Nebraska library commission for 1914-16 contains extracts from a few letters as follows:

"Being a lover of good books, I have certainly appreciated the books which the nurses distribute from time to time throughout the different wards. When one can sit here in the State Hospital and read such books as the *Efficient Life*, Alice and Phoebe Cary's poems, and so on, it gives the place a sort of homey halo after all."

[26] Nellie Williams. Letter of April 16, 1917.

"There are several branches of the Nebraska Library and one of the most practical in its selection and use is the State Hospital Library. It is composed of current literature and many volumes from some of our best authors, extra good works. Library day for the men comes three times a week and is looked forward to with much anticipation by many on our ward. It would be regretted if we did not have a chance to make these regular trips to the library."

"Having taken pleasure in reading many books in the library here at Ingleside, I am very glad to mention my likes in regard to it. I like the books on nature most. *In God's out-doors*, *The Alps*, *The spell of the Rockies* and others I might mention. Many of the novels are so amusing that they are a great help in passing the time pleasantly. Many of the books point a moral such as *Up from Slavery* by Booker T. Washington, which shows what a man can do if he has ambition. Books may do great good. 'May blessings be on the head of Cadmus the Phoenician or whoever it was that invented books.' "

"In behalf of several inmates on 24, allow me to express our appreciation for the privilege of reading the Ingleside state library books, either historical, Biblical, or fiction as suits our moods. They indeed help us to while away many moments and instruct us when inclement weather keeps us indoors. We want to thank you for this pleasure and privilege allowed us."

"In appreciation of the reading matter, books, magazines, and newspapers furnished Ward II, I am permitted a word of praise. These literary and news advantages have been a source of great pleasure and diversion and no little fund of information during my three months sojourn here."

"As I have never read in but very few books, until I came here, on account of close confinement I began reading the book, *The price of the prairie*. Thought that I would read some for pastime and the book became very interesting to me. Also started another but have not finished it yet. I certainly enjoyed the first but can not get much interest from the latter which is *Innocence Abroad*."

"I derive much benefit from the books insomuch as they pass the time pleasantly, leave one in a happy state of mind, and give food for thought. I specially enjoy those dealing with home life, such as Grace Richmond's, Kathleen Norris, and Eleanor Porter. I also enjoy those of travel and history."

"Among the many pleasant advantages offered by this free institution, the library deserves honorable mention. Any one who is considered able is allowed to draw books and take them to his ward. Among the books which the writer has enjoyed the *Oregon trail* by Francis Parkman ranks first, as picturing the hardships of the early settler, with its fascination of style and diction which make it interesting as a novel. I also like the writings of Rev. Van Dyke in his *Little Rivers*, *Days Off*, and others vividly describing fishing and hunting trips. What a difference between the pleasure of listening to choice literature in the commodious library hall and doing all your reading in a ward, surrounded by a group of unfortunates who do not know what they say, nor how they say it, nor when. Surely the library hours are an agreeable change from the daily routine of our life of seclusion. All this is a step in the right direction, conducive to mental healing, resulting in self-control accompanied by will power."[27]

The following quotations are from the letters which accompanied the monthly report sent to the Supervisor of Institution Libraries by a patient, who served as librarian in one of the Minnesota state hospitals:

[27] Nebraska Public Library Commission, *Biennial Report*, 1914-16, 131-32.

"I am trying my old method of quieting nerves through books and we find it successful. When our patients are not busy they are fighting and swearing, so yesterday (Sunday) I brought down the Bible scrap-book and a Bible, and you don't know what a pleasant time we had looking up and explaining . . . The best method of quieting the nerves is the continuous bath. However, many cases rebel and we could not keep them in without trouble. This we have in some measure overcome by the nurse reading while they are in the tub."[28]

"I love my books, and the patients say: 'Oh, if we could stay up in the library and have you tell us more'; how they can see mentally; how I make them feel even the character. What a wonderful blessing is the story hour!"[29] "I have in my hall seven finely educated high school girls and they read continuously when we do not tell fortunes."[30]

When the traveling library was to be packed, to send on to another hospital, she wrote:

"Some of our readers read late last night and up at four this morning, in order to finish their books, and I read several of the books and copied the main ideas, so they were pleased."[31]

"I have one patient learning to spell out of the old speller."[32]

"To-day I have them looking at picture books. We are full to the brim with patients, and quite noisy, poor things, when they can't read."[33]

"I have such a pitiful call for simple books, words of one syllable; foreigners who do want to learn."[34]

"I know what the library has been to me and to many others. I consider the mind needs food as well as the body. What a strange bitter thing is memory, and we can only forget by fixing and feeding our minds on books whose authors have found the problem of right thinking . . . Pure and noble thoughts have their own reaction, and in our environment here deterioration sets in very quickly, for laziness and evil minds prey upon other minds, and the class of people we have here need strong character built up and clean thought."[35]

This librarian's comment on individual books is interesting; she had several requests for *Pilgrim's Progress* but only had one copy, in French.[36] She says:

"*The Building of the Nations* was considered interesting and explanations and scenes of the West helped with the reading of western stories. *Mexico* helped make the cliff-dwellers a reality, and *Riders of the Purple Sage* interesting. California scenes called for Gertrude Atherton's stories."[37]

"I have had a call for botany, astronomy, and musical books."[38]

[28] Letter of April 19, 1915.
[29] Letter of May 1, 1915.
[30] Letter of May 1, 1915.
[31] Letter of May 8, 1915.
[32] Letter of May 8, 1915.
[33] Letter of May 1, 1915.
[34] Letter of May 8, 1915.
[35] Letter of September 15, 1915.
[36] Letter of April 19, 1915.
[37] Letter of September 15, 1915.
[38] Letter of September 15, 1915.

"Hopkinson Smith's books, Bell's, and Churchill's *Modern Chronicle* are among the most popular. *Going Some* and *White Mice* wear well. Have tried to make Björnson's books interesting, but you know they end just where they should begin."[39]

"My girls have enjoyed Louisa M. Alcott, as I obtained *An Adventure with Hildegard Hawthorne* now beginning the first of a series of *Adventures with our favorite Heroine*, with fine photographs of the childhood home, and *Inside and out of Fruitlands*. L. M. Alcott's life, though hard and tragic, and her stories inspire any one."[40]

She finds pictures, as well as books, are appreciated.

"I would much like to have as many photos as possible and a magnifying glass."[41]
"I feel such pity for these foreign patients. I do try to tell them about pictures."[42]

"I do feel so sorry for the foreigners who must be content with pictures."[43]

"I am planning to make some short story and picture books of strong cloth and am asking friends to save me scenes and photos. The men love pictures. I was successful in obtaining a book, *Beautiful Scenes of Canada*, which has made *How Canada was Won*, more interesting."[44]

At a quarterly conference of the Iowa board of control and the superintendents of the institutions, Dr. Mary Lawson Neff contributed a paper, in which she outlined a model program for a ward in a state hospital. Her plan for the library hour was as follows:

"The library hour on Tuesday morning should be used to increase to the utmost the real value of the library, and the supply of other reading matter to the hospital. Sometimes it might mean taking a group of fifteen or twenty patients to an attractive library, more often, it would mean bringing in an armful of books to the ward, talking them over, assisting the patient to select a book or reading a chapter aloud to arouse interest. It would also mean distributing liberally the extra periodicals that every state hospital can secure from the public, by making its wants known. An estimate of five magazines per year for each patient is moderate; that is, a hospital of 1,000 patients can easily absorb 5,000 periodicals per year. The pile brought in for the library hour can first be looked over, and pictures suitable for scrap books or decorative posters laid aside. Short stories for reading aloud are excellent things to have on hand and since it is difficult to find these at a moment's notice, they should be carefully preserved whenever they come to light. The pleasure of looking over a supply of reading material and culling what appeals to one's fancy is a simple, human joy, that can easily be furnished."[45]

Some alienists do not hesitate to admit their firm belief in systematic reading as a direct therapeutic factor in the recovery or improvement of the mental powers. Such a position is well stated by Doctor B. F. Williams, superintendent of the Lincoln, Nebraska, Hospital for the Insane, in a letter of April 18, 1917.

[39] Letter of September 15, 1915.
[40] Letter of April 19, 1915.
[41] Letter of May 1, 1915.
[42] Letter of July 1, 1915.
[43] Letter of July 13, 1915.
[44] Letter of April 19, 1915.
[45] Mary Lawson Neff, *Iowa Bulletin of State Institutions* 16:190-91. 1914.

"One of the early and constant manifestations of mental disease is the loss of the voluntary attentive control; accompanying this loss is a corresponding loss of appreciation for the initiative processes. The development of the processes is best accomplished by the systematic exercise of the function much as the muscle is increased in power by use.

"A patient suffering from a degenerative motor disease if permitted to sit idly, will degenerate rapidly. If careful and systematic exercise is prescribed, the degenerative processes will be arrested, or a state of improvement may intervene. One of the early faculties of child-life is the faculty of imitation and imagination. The child lives in fairy-land, dwells in a life of fairy tales, deals with fairy personalities, and out of it all is developed the speculation which forms the basis of genius in after life. Throughout the entire life the individual manifests a keen appreciation of these faculties. Day-dreaming is a pastime that all enjoy. It is closely connected with creative endeavor and is stimulated by reading; therefore, to approach normal, it is highly important that normal processes be employed.

"I call to mind at this time the influence of the library upon a patient, an epileptic, a man of attainment, having occupied high positions during his life, but as a result of epilepsy has become reduced in mental power and at times of seizures is quite confused. During the interim he is prone to be introspective and retrospective. Under the influence of systematic reading, he has become interested in the institution, its operation, in other patients, and is becoming thoroughly adjusted to life in the institution.

"Patient ———, a psychopathic individual committed to this hospital, was somewhat troublesome on the ward, mischievous and gossiping. Under the influence of systematic reading, she spends her time largely in the library or reading books on the ward. Under the influence she has become tractable, cheerful, and manifests a keen interest in the institution and its problems.

"A third patient, a finished musician, suffering from a progressive type of dementia, is keenly alert to his condition and, as a patient in the hospital, would deteriorate rapidly if such things which normally occupied his time were withheld from him. But under the influence of systematic reading he has shown an arrest of the dementia. In fact, his retrogression in a private institution in an eastern state was very rapid; having been transferred to this hospital, he has not shown the progressive deterioration, in fact, there is some improvement. Whether this arrest is temporary or permanent is, of course, not yet established.

"Many patients could be tabulated who would supply interesting data. It is sufficient, however, to say that the library is an important asset. Under skillful management it supplies a long-felt need in institution life. A power for restoration, not in itself curative, but adding materially to the other influences which are brought to bear in the modern treatment of mental diseases."[46]

A corroborating opinion is that of Dr. Witte, superintendent of the state hospital at Clarinda, Iowa.

"I think that a library occupies a very important rôle, much more important than simply that of amusement or a pastime, and I am convinced that it will eventually rise to the dignity of a remedial agent . . . If we should be permitted to come back in one hundred years no doubt we should find the librarian acting under the direction of a physician and occupying a very important position in the treatment of the insane, more particularly in the earlier forms of insanity, such as dementia

[46] Benjamin F. Williams. Letter of April 18, 1917.

praecox and the like. The library will occupy a more important rôle in that direction than is credited to it to-day."[47]

The chief value of the state hospital library, all will agree, is to provide diversion and recreation. Many of the patients carry a heavy load of dejection and worry, and are often obsessed by fancies and suspicions, to these the books are a soothing and calming influence, suggesting a happier change of thought; some are indifferent, listless, and need to be vitalized by stirring tales of mystery and adventure; others are restless, easily fatigued by any attempt at work or exercise,—for these, reading is often the only occupation upon which they can center their minds, even for brief periods. To the convalescent, the library may be a veritable blessing. "If we can not center our minds on good reading we would soon be desperate," writes such a patient. "It is sometimes hard to keep a stiff upper lip amidst so much noise and sadness."[48] The state institutions can provide few individual rooms and the loss of privacy is often keenly felt; absorbed in an interesting book, the convalescent may find isolation even in the crowded ward.

When a patient leaves the hospital, the reading habit, strengthened in the institution, will be an aid in the delicate matter of picking up the threads of the old life. He may return to share in the family worries and often to face the problem of self support. "The people to whom books mean most," says Miss Carey, supervisor of institution libraries of Minnesota, "are not the happy prosperous people, they are the poor, the lonely, and the unfortunate."[49] The public library will prove a refuge from the idly curious and the books themselves a chief factor in the necessary fight against depression.

2. The Institution for the Feeble-minded

In the discussion of the need for providing books for the wards of the state, it is probable that many would regard this as a problem which did not concern the institutions for the feeble-minded. They would ask if the feeble-minded child, for he always remains a child, is capable of enjoying books, and if the library meets any real need in the equipment of the institution. The various theories in regard to the mentality of the mental defective are enumerated by Binet and Simon, in their book, *Mentally Defective Children*.

"A defective child does not resemble in any way a normal one whose development has been retarded or arrested. He is inferior, not in degree, but in kind. The retardation of the development has not been uniform. Obstructed in one direction,

[47] Max Witte, *Iowa Bulletin of State Institutions* 13:125-26. 1911.

[48] Letter of October 9, 1915.

[49] Miriam E. Carey, *New York Libraries* 3:222. 1913.

his development has progressed in others. To some extent he has cultivated substitutes for what is lacking. Consequently such a child is not strictly comparable to a normal child younger than himself. So far as certain faculties are concerned he remains at the level of the younger child; but in respect to others he is on a level with normal children of his own age. An unequal and imperfect development is consequently his specific characteristic. These inequalities of development may vary to any degree in different subjects. They always produce a want of equilibrium, and this want is the differentiating attribute of the defective child . . . We frequently find in such children defects of speech . . . One finds in some cases peculiarities of understanding, reasoning, imagining, difficult to define, but which do not appear to have their equivalent in younger normal children, and which therefore, do not result from simple retardation of development."[50]

A visitor to one of these institutions will find a school with classes from the kindergarten to the fifth, and possibly the sixth, grade; half the time being generally spent in industrial work. The rooms are decorated with attractive drawings made by the children; there are calendars where the birds are listed as they arrive and the first flowers are recorded; one class may be engaged in a competition to see which side can add figures more quickly; another is carefully writing sentences on the board; a geography class is talking about Chicago and the states from which its imports of beef, grain, lumber, and metals are brought. There must be patient teaching, often repeated, also a variety of devices for holding the attention, as few of the children can progress beyond the fourth grade. It is in the music and reading classes that one finds the greatest interest, for the feeble-minded love to sing and to read, and their memories are practically as good as those of normal children. One who listens to the stories as they are read or told in the class, is not surprised to see the interest which the children take in the library. At the Indiana School for Feeble-minded Youth, there is an excellent library. Dr. George S. Bliss, the superintendent, writes:

"I personally regard the library in a school of this class as of very great value. Our inmates use it very largely and very regularly during the winter season. Some of the children read as many as ten, fifteen, or twenty books during the season, and all of them who are able to use it get very great benefit from the opportunity."[51]

At the Nebraska Home for Feeble-minded, the library has made a specialty of finely illustrated editions of children's books.

Miss Margaret McLean, principal of the school department at the Minnesota School for Feeble-minded and Colony for Epileptics, says of their library:

"There is absolutely no other one thing that adds to the happiness of our children, and aids in their discipline, as the library does. They are solely responsible for the care of the books issued to them, and it is rare indeed that a book is lost or mistreated

[50] Alfred Binet and Th. Simon, *Mentally Defective Children*, 13-14.

[51] George S. Bliss. Letter of April 30, 1917.

by the one to whom it is issued. I wish I had 10,000 books for them . . . We have added books slowly; for this reason they are all read, and seem like old friends to the children. When a book that they are especially fond of begins to show that it is beyond repairing, petitions begin to come in, to 'please put ——— on your next estimate.' In some of the classes where the children are too small to read, the attendant draws books and many happy hours are spent at her knee, listening to the beloved fairy tale."[52]

In this institution the books are drawn out by the children and taken from the library room. The teacher decides when a child is able to read by himself; it is a proud moment when he brings to the librarian a statement that he is ready to begin his literary adventures, for there is a ceremony to be gone through and a pledge to be signed: "I hereby promise to use the library books with care, and to return them promptly and in good condition. If I fail to do so, I agree to give up the privilege of using these books until I can learn to be more careful with them." "It is a well known fact," says Miss McLean, "that his 'library' as the children say, is the one thing that a boy will not share with his best friend. His skates, his skis, his sled, his knife, his box of fruit, his candy, his clothes off his back, even, are a friend's for the asking, but his library book, never! You see something might happen to it . . . It is seldom that one has to forfeit the privilege of the library, and never has a child who really enjoyed his books, been forced to do so the second time . . . A number of the readers keep lists of books which their friends have enjoyed and told them about, and these they will ask for first, and show great disappointment if they are out. Of course, they want the book, 'all the fellows are talking about it.' "[53]

Another instance of the use of the books is that given by Dr. Walter E. Fernald, superintendent of the Massachusetts School for the Feebleminded. He had sent out his first farm colony to clear some waste land at a distance from the institution; there were in the group twenty-five of the brighter boys and twenty-five of a low grade of mentality. He thus describes the value of the books in solving the problem of their leisure hours.

"A second test of the value of the colony was whether we could keep those boys, who were accustomed to institution entertainments and the life of the institution, on the top of a mountain in the country, with only boys like themselves, happy and content. That is where I found I had to have a little larger staff than I had anticipated. Each evening one assistant is detailed to help in this . . . Preferably we choose a woman to have the care of the entertainment of the boys in the evening. We have selected perhaps sixty or seventy-five volumes of boys' stories and from the beginning, every evening, a woman has read aloud a certain number of chapters. They have read book after book through and it is a settled thing now. I think these continued readings have had a great deal to do with the contentment of the boys. We have an organ and several other musical instruments, and every evening there

[52] Margaret McLean, *Modern Hospital* vol. 6. May 1916.
[53] *Ibid.*

is a half hour of song. After the songs it is a settled policy to play games, cards, dominoes, and checkers."[54]

The books in a library for the feeble-minded are naturally largely juvenile fiction and fairy tales, with picture books for those of younger mental age, and some travel and biography for the brighter children. Louisa M. Alcott, Ralph Henry Barbour, DuChaillu, Kirk Munroe, the *Jungle Books*,—all the children's favorites are represented.

Since there are several institutions with successful central libraries, and others where smaller collections of books in the several cottages have been found more practical, it has been proved that a certain percentage of the feeble-minded can direct their own reading, and a still greater number find enjoyment in hearing the books read aloud. The answers to a questionnaire, in regard to the libraries in these institutions, included those of eight colonies for epileptics, which reported the majority of their patients as feeble-minded. Of the thirty institutions reporting, eight had no libraries; three depended upon small collections from the state traveling libraries. The school principal wrote, in one case, "For a time we attempted quite high ideals in the carrying on of our library, but found it to be a waste of work . . . Feeble-minded children, that is the average proportion of such children, do not have an appreciation of books. They enjoy pictures and the more childish magazines—but not *books*." Dr. E. R. Johnstone, superintendent of the training school for feeble-minded, at Vineland, New Jersey, in his presidential address before the Association of Medical Officers of American Institutions for Idiotic and Feeble-minded Persons, in 1904, said: "Our association must . . . demand for the feeble-minded the education to which every child in the Union is entitled—whatsoever is best fitted for him."[55] One who has visited the library of an institution for the feeble-minded and has seen the child-like pleasure which they take in the well-used volumes is convinced that books form an important part of the education to which they are entitled.

3. The Institution for Delinquents

In the institution for juvenile delinquents the library can be of the greatest service,—it is necessary as an adjunct to the school, giving interest and value to the geography, history, and the English teaching; it affords a diversion which all may enjoy, and is thus an aid in maintaining order and good conduct; and, most of all, the growth of the mental powers and the desire for further knowledge lead to the development of the reading habit, which may be a powerful aid against the temptations of the future life outside the institutions. The delinquent boy has usually had very little

[54] Walter E. Fernald, *Journal of Psycho-Asthenics* 7:76. 1903.

[55] E. R. Johnstone, *Journal of Psycho-Asthenics* 8:68. 1904.

opportunity to find enjoyment in books. He is, "in a very large proportion of cases," say Miss Breckenridge and Miss Abbott, "the eldest child of a large family . . . and the great majority of these families are poor. His slight wage-earning capacity must, therefore, be utilized at the earliest possible moment at which his age and school certificate can be secured and he can become a supplementary wage-earner with the sanction of the law. The temptation to evade the law is sometimes too great to resist and the child is not only deprived of the slight educational requirement prescribed by the law, but is given perhaps, a first lesson in law breaking, by parents who swear that he is fourteen, when he and they alike know that he has not yet reached that age."[56]

He is at the age of adventure—the age at which the average boy reaches out in many directions, making things, experimenting with machinery, striving to excel in sports. The delinquent boy may have had a very meagre experience during this period of his growth. Dr. William Healy, formerly director of the psychiatric institute of the Juvenile Court of Chicago, in his book on the delinquent, speaks more than once of the limited mental development of these boys.

"We have been exceedingly impressed by what we have learned concerning the paucity of mental interests of individuals who start criminalistic careers . . . These unfortunate individuals are generally unaccustomed to playing games that have interesting mental content, they rarely are found to read the type of books which leads them into constructive activity. They universally have a very slight knowledge of the modern scientific interests, such as electricity, which fairly possess the minds of more fortunate young people. Such normal activities as that of collecting objects of interest are rarely met with. It would be well if there were a more definite attempt to increase in the early school life the acquirement of such mental interests as might save many from delinquency."[57]

The boys in these institutions are voracious readers; out of twenty-four reporting, fifteen institutions said that all, or nearly all, of the boys used the library. The books available for them must be interesting, for prosy, long-winded tales, or those which are childish or moralizing, will be left on the shelves. All boys are interested in stories of adventure and hunting, and those in which baseball and football are prominent themes; they like plenty of conversation in books, and cast a critical glance over the volume to see if there are many unbroken pages. They will read biography and history, especially that of our own nation, but both must be picturesque to attract them; they are interested in travel, especially if it contains the spice of adventure. Books and magazines which tell of aeroplanes, automobiles, motor boats, are interesting to all boys; those which contain directions for making kites, bird houses, etc., are always in demand. The books on

[56] S. P. Breckenridge and Edith Abbott, *The Delinquent Child and the Home*, 131.

[57] *The Individual Delinquent*, 297, 300.

animals are very popular; perhaps a scientist may now and then be lost to the world, because people seldom encourage a boy's love of collecting, or his careful observation of birds, moths, butterflies, and insects.

There is another side of the boy's nature which is unfolding at this time, for it is an age of emotional growth. He is a hero-worshipper, though he lets no one suspect it, and he lives the life of the great men of whom he reads; courage, self-sacrifice, honor, steadfastness, all are appreciated by the boy, quite as much as by the man, and he has the sincere desire to show such conduct under similar circumstances. This is the age at which the older boys begin to take an interest in love stories, and they too often find sordid tales which destroy the high ideals of their dreams.

The boy who leaves the school may look back upon it as the place where a new world opened to him, where he, for the first time, had a genuine opportunity for an education, a time for recreation, and where he might show by his conduct that he was worthy of the confidence that was reposed in him. The library may be his happiest memory, for his mind has been quickened and stimulated in many directions and he can continue this broadening interest through the books available outside. Best of all, he who had admired the bully and cheat has met new companions and shared their adventures in many lands, and has unconsciously gained a new standard of conduct. The environment outside is still the same, the gang and the crap-game are still in the city alleys, and the same indecent stories are circulated in the country hamlet; if he has learned how to work and how to play, and has the unfailing resource of books, he need not be driven in desperation to the companionship of those who will drag him down.

The delinquent girl affords a special problem, due to the fact that her offense is usually one for which society will ostracize her. "In such reports of delinquency as are available," says Katherine R. Williams, a member of the Wisconsin State Board of Control, "one finds that the major per cent of women and girl offenders are sentenced for offenses against public morality and decency. Of a total of 179 girl offenders, reported upon in the *Study of Juvenile Delinquency and Dependency in Los Angeles in 1912*, over 87 per cent were guilty of such offenses, leaving 13 per cent guilty of larceny, burglary, assault, etc. Dr. Davis estimates that 66 per cent of the women serving sentences for the same time were offenders against public morals, while 34 per cent were sentenced for offenses against property or persons."[58]

As in the case of the delinquent boy, she comes often from a poor or broken home, where the parents are separated, or one or both are dead, or there are other conditions which make for instability or bad conduct. She learns at the school the home arts, cooking, sewing, house-furnishing, and

[58] Katherine R. Williams, *American Prison Association Proceedings*, 1914, 350-51.

en, in addition, something of agriculture, gardening, dairying, poultry
l beekeeping, and even carpentry and cement work. If she returns to
' own family, she will find many of the old associations unchanged. If
: goes to a new environment to seek employment, the problems of ad-
itment are serious ones: she has few points of contact with the new life
d must be slow in making friends, lest inquiry be made into her past:
e is lonely, missing the community life at the cottage, where occupations
re shared and leisure time did not drag. Recreation is a problem now,
r there is little pleasure in the theatre or in walking, without a companion,
id games can not be played alone. A love for books now becomes not
ily a pleasure, but a great protection, reading is almost the only recre-
ion which she can enjoy by herself, the public library is open during her
isure hours and the books are free for her to enjoy. Here is a community
istitution to which she may go, a reputable place, lighted, well-super-
ised, where she will be protected from the advances of undesirable asso-
iates, and where her presence will attract no comment.

The girl who goes from the institution to a home of her own is sure to
nd that house-furnishing and housekeeping are not ends in themselves.
\ stable home is founded, not alone on a clean house and wholesome meals,
ut on the intelligent companionship of husband and wife, parents and
hildren; there is a need for mental interests and the stimulation of intel-
ectual growth. The mother who can help her children with their lessons,
who becomes a leader in her own community, is the one who is making the
nost of every opportunity to improve herself.

The main purpose of the libraries in institutions for delinquents is to
reate and encourage a love for good books. As it is our hope that the
lelinquent shall not, in turn, become the recidivist and the adult prisoner,
so we must strive lest the mental vacuity, which, as Dr. Healy says, is so
often the characteristic of those who come before the juvenile court, shall
also distinguish them as they leave the institution for the life outside. It
is a task which is the special problem of the library, supplementary to the
work of the school. "The key note to success of educational effort," says
Dr Healy, "is the offering of such material as will arouse healthy mental
interests and add to healthy mental content. The mere giving of formal
education, as such, affords hardly any part of this solution."[59] It is there-
fore discouraging to find that in 1916, out of thirty-one of these institu-
tions, nine stated that they had no library and fifteen had made no book
purchases during the past year, one of them none in nine years.

4. The Reformatory

The term *reformatory* is used to describe an institution for the younger adult or first term offenders, and sometimes that for women prisoners. A

[59] *The Individual Delinquent*, 127-28, 175.

large percentage is sent there for the crimes of grand larceny, burglary, and forgery. Their offences are, therefore, those for which they might be committed to prisons, had not the state segregated them in separate institutions, in order that they might not come in contact with older and supposedly more hardened criminals, and that during their incarceration they might receive further training. It is usual to require that half the day should be spent in school and half in industrial work. The school grading of these offenders is more difficult than in the school for delinquents, for although they are all past the grammar school age, very many must be classified in the lower grades. At the meeting of the American Prison Association in 1914, Dr. Edith R. Spaulding, resident physician of the Massachusetts Reformatory for Women, presented the results of a study of 400 women prisoners, whose average age was 27.4 years.

"Of the 400 women 21.1 per cent (nearly a quarter) had not progressed beyond the primary grades; 54.6 per cent had not progressed beyond the sixth grade in the grammar school; while 96.3 per cent had stopped their education somewhere in the grammar school . . . Nearly one quarter of the total number are ready for advanced work, while over 45 per cent need the most elementary training in the 'three R's'."[60]

A study of the report of the Minnesota State Reformatory for 1914-16, shows that 569 prisoners averaged 22.19 years of age; 23.57 per cent were from 19 to 20 years; and of 387 in school, 40.8 per cent were in the first three primary grades.[61] Under these circumstances, it is not easy to make school work attractive to young offenders, who, with few exceptions, have been wage-earners before their commitment. The part which the library can play as a supplement to the class work, and as a disciplinary and reformatory agent, is recognized by the officials; it is usually placed in charge of the school director, or one of the school teachers. The Director of Education of the Washington State Reformatory says:

"It is part of the scheme of the Director of Education to give instruction to young men in the matter of getting the most good out of what they read. A prisoner must think. Books are the best possible aid to right thinking . . . It should be regarded as a plain duty of the state to furnish each prisoner with a good working library. The same amount of money could not be invested to a better purpose."[62]

Similar testimony is given by Mr. Bert E. Merriam, psychologist and educational director of the New Jersey State Reformatory:

"I believe that it [the library] should be the center of the whole institution, it should be the best thing that there is, the show place, if you wish to call it that . . . there should be no difference between a library here and one in the city or the town. Practically none of our inmates have ever frequented the public library. To those who will profit by it, there can be no greater service than to teach them the habit

[60] Edith R. Spaulding, *American Prison Association Proceedings*, 1914, 366, 368.

[61] Minnesota Board of Control, *Biennial Report*, 1914-16, 192, 194.

[62] *New York Libraries* 4:146-47. November, 1914.

COMPARATIVE TABLE OF REFORMATORY LIBRARIES, 1915-16*

	Inmates	Employees	Annual Appropriation	Purchased	Donated	Added by Binding	Total Volumes	Circulation	Per Cent of Readers	Per Cent Foreign	State Traveling Library
Indiana	1,330	80	$ 1,000	500	100	200	10,892	168,750	100		
New York (Elmira)	1,103	137	400-500	300-400			6,000	83,306			
Kansas	372	43	500-1000	350			4,000				
Iowa	770	100	550	300	10		8,000	120,000	85		
New York (Napanoch)	450	57	120	250	100	200	2,500	9,000	all		
Michigan	638	45	300	200-300	50	None	2,496	50,000	90		
Ohio	1,300	70	300	214	40	30	3,243	72,000	all		
Illinois	925	90	500	100	few		12,000	49,423	all		
Nebraska (Women)	40	9	85	75		none	291		90		
Kentucky	1,513	65	50	50	50	300	1,800	31,300	75		
Minnesota	619	64					2,899	39,804	80		
Washington	440	37	550		700		4,000	26,276	80	25	
Wisconsin	310	45	varies	1,200	few	few	1,200	10,400	66	20	
New York (Bedford)	400	80	none	none	300	none	2,600	5,000	70	10	100 vols.
Connecticut	256	45	none	none	150	none	1,200	7,500	90		
Oklahoma	383	56	none	none		none	500	2,000	†		
Colorado	140	22	none	none		none	500	1,500	25		
New Jersey (Women)	72	13	none	none	50	none	75-100		50	50	few
New York (Albion)	233	53	none			none			80		100 vols.

* Arranged in order of purchase.
† All who read.

of going to the library to browse around, and feel that it is a good place . . . The pleasantest room in our institution is the School Library."[63]

With the exception of the library of the Iowa state prison, there is, to the writer's knowledge, no other which can show a use of the book collection, comparable to the record of the Indiana State Reformatory at Jeffersonville. It is thoroughly organized, catalogued, and efficiently administered. In 1916, the Superintendent of Schools stated that 100 per cent of the inmates used the library of 10,892 volumes; the figures of circulation for the year being 83,191 book issues and 85,559 magazines, a total issue of 168,750. This institution has a bindery, and 200 volumes, chiefly magazines, are added yearly by binding. It has an annual appropriation of $1,000 for the library, of which approximately $500 is spent for books.[64]

The effect of a definite and regular appropriation upon the growth and use of the reformatory library, is well illustrated by the preceding table compiled from the replies of nineteen reformatories, received in 1916.

5. The Prison

The prison library problem is not one of readers, but of books to supply the demand. In spite of the dead-wood gathered from attics and from Sunday-school libraries,—the out-of-date religious books, and the moral tales,—the prisoners' reading is far in excess of the circulation statistics of other libraries. The table on page 26, compiled from information received in 1916, includes figures from all the institutions which sent fairly complete returns.

The prisons do not seem to vary greatly, either as to the number of the population, nor the size of the book collections; the only library of over 10,000 volumes is that of Joliet, Illinois, which consists of 33,000 volumes, in the main well selected. An investigation of the catalogues shows a very real difference in the proportion of readable books. Many list the hymn books, the school texts, the old theological books, and the modern literary wall-flowers, known to the book trade as "plugs." A few libraries have been reorganized, the unreadable and worn-out books discarded, and good fiction, travel, and biography added, as well as books on the technical trades. It has been the universal experience of those interested in choosing books for prisoners, that the men tire of fiction and ask for something of more permanent value. There is a special need for books which will provide the opportunities which the prison school is as yet not able to give.

In California and in Kansas, many men are taking university courses by correspondence; some of the correspondence schools offer special rates to prisoners, and hundreds of men are availing themselves of this opportunity.

[63] Bert E. Merriam, *American Prison Association Proceedings*, 1913, 171-72.

[64] Questionnaire, 1916.

COMPARATIVE TABLE OF PRISON LIBRARIES, 1915-16*

	Inmates	Employees	Annual Appropriation	Purchased	Donated	Added by Binding	Total Volumes	Circulation	Per Cent of Readers	Per Cent Foreign
Illinois	1,730			200		50	33,000	60,000	95	27
Ohio	1,933		none	none	1,100	none	9,000	67,374	40	
Federal Prison (Leavenworth)			500	300-500	50	15	8,800	75,000	35	
Missouri	2,643	123	500	100 +		none	8,000	64,480		
New York (Auburn)	1,658	165		200	none	none	8,000	3,000	60	45
Minnesota	1,029	150		350		159	7,250	68,742	75	50
Indiana	1,300		750	400	few	none	6,500	68,600	80	
Iowa	664	98	500	400	20	none	6,240	101,084	80	
Colorado	821			150	75	few	5,700	250 per day	50 +	
New York (Clinton)	1,400		500	500	few	300	5,100	145,600	all	
Maryland	1,000			varies			5,000	45,000	75	
Michigan	994	102			250	500-600	4,500	55,000	90	20
New Hampshire	245	24	200	200	none	500	4,380	28,400	70	
Nebraska	380	42	212	270		none	3,603	27,463	80	
California (Represa)	1,267	100					3,500	26,000	65	
North Dakota	290	60		100	50		3,415	8,027	85	
New Mexico	420	35	120	50	few	none	1,500	3,500	33	
Vermont	240	21	50	75		none	900	4,200	30	
Arkansas	1,200	30	none	none	all		500	1,000		

* Arranged by size of book collection.

They need books of reference and in many cases have had to buy them personally. The papers prepared for the Chautauqua circles and similar organizations are on topics for which a well-chosen library can provide material. The prison population is a shifting one; most of the men are soon to go out into the world again to take up the responsibilities of life, and they need every aid in preparing themselves for earning an honest living.

Since these men are able to receive benefit from books, for a majority have been through the common schools, and since they are everywhere desirous of reading, it would seem a short-sighted policy to refuse to provide a sufficient quantity of good books. The evening hours are free for study in most prisons, and reading would seem to be the most approved way of spending the long hours of Sunday, when the men are locked in the cells; the galleries where the prisoners are busy with their books are not those in which discipline is a difficult question.

An actual experience of some years in following the reading of prisoners, has shown that the chief benefit from books lies, not in the information they may provide, but in their power to furnish the mind with wholesome thoughts. To quote Dr. Healy again:

"Another condition to be vastly deplored while society is detaining the offender may be simply named mental vacuity. What can any one conceive to be the mental content of prisoners when they are unoccupied? . . . No greater proof can be conceived of the truth of the empty mind being the devil's workshop, than what we have learned to be the thoughts brewed during the unoccupied moments of prison life."[65] . . . "In nearly all people visual memory and visual imagery play the most dynamic part in mental life, it is the thing seen which is presented again in consciousness with the greatest force and probably the greatest frequency. The strength of the powers of visualization is to be deeply reckoned with when considered with springs of criminality . . . The individual with paucity of healthy mental instincts is much more likely to be obsessed by the recurrence of imagery of some experience, which in a more healthfully occupied mind would be almost a negligible influence for the bad. . . Mental vacuity permits the growth of pernicious imagery. I am inclined to think that here is one of the greatest psychological principles that can be used in the effective treatment of the offenders."[66]

If the prisoner has gone through the usual county jail experience, he has known the worst of evil company; he finds in the prison, in spite of the discipline, an opportunity to learn of the records and methods of more notorious criminals. In the shop or in his cell, his thoughts are active, the old life is lived over again and the new life beyond the walls is pictured during most of his waking hours. He needs books to turn his thoughts into other channels,—tales of adventure, histories of pioneer days and trail-making. The salacious novel, with its suggestive descriptions and false standards, is not good mental food for the man who needs to learn self-control. A study of the library catalogues of twenty-three American

[65] *The Individual Delinquent*, 224.

[66] *Ibid.*, 233.

prisons, made in 1912, showed that many books which were considered improper for circulation by the public libraries had been purchased for the penitentiaries.[67]

The library is but one of the reformative agencies of the prison,—the school, the correspondence courses, the reading circles, and the chapel services all have their place. Not every man is reformable, but each is in some degree educable. Few states provide for any further schooling than brief courses for illiterates, and the men must depend for their further improvement upon general reading, as is shown by the use made of these libraries. It was Lombroso's belief that the criminal was made more dangerous by education, but the American officials of to-day do not agree with him. Warden Wells of the Kentucky state prison, voices the opinion of most of them:

> "A good prison library is worth much, if it circulates . . . We have but little patience with the idea that the reading of the daily papers will hurt anybody. One of the very best things that the management can do, is to create and foster the *reading habit.* The intelligent prisoner is generally the good prisoner, the low and vicious are generally the ones who are steeped in ignorance. There may be some exceptions, but this is clearly the rule. Let the electric light burn until nine o'clock, see to it that each prisoner can read well, furnish him with good literature, let them subscribe for a daily paper, and you have done much toward good discipline—finally, good citizenship."[68]

6. The Institution for Inebriates, the Sanatorium for Tuberculosis, the Orthopedic Hospital

A few states have established institutions for inebriates, where they may be under control and receive custodial and medical care. A well-chosen library is a valuable influence in controlling the restlessness and dissatisfaction of inmates. If the reading habit is a safeguard within the institution, it is a much greater one after the patient has returned to the life outside. "The labor," says Dr. Freeman of Minnesota, "is to reëducate, to strive to form a new character, to encourage a habit of sobriety instead of drunkenness, to teach him work to occupy himself, to obtain for him a new outlook on life, and to teach him his duty to himself, his family, and his neighbors."[69] There is the same need for education and diversion in the new state farms for vagrants and short-term offenders.

The need for books in the sanatorium for tuberculosis does not require elaboration; many of the patients are in bed, and others, through the nature of their disease, can not engage in exercise. Reading is almost the only diversion open to them. Twelve of these institutions reported that

[67] Florence R. Curtis, *Survey* 29:323-25. December 14, 1912.

[68] A. J. G. Wells, *American Prison Association Proceedings*, 1914, 74.

[69] Minnesota State Board of Control, *Biennial Report*, 1914-16, 278.

they had made no book purchases during the years of 1915-16; the majority depend almost entirely upon donations. As the patients have generally completed a common school education and an average of 65 per cent are reported as readers, the annual book purchases of many of these institutions seem very inadequate; several say that they have many calls for books which they can not furnish. People who appreciate good books will not long be satisfied with those which come as chance gifts, and those who at first read mainly for diversion will soon demand something beside light magazines and fiction; a large book collection is needed when so many hours of the day are spent in reading. Dr. H. V. Scarborough, superintendent of the state sanatorium of Iowa, has solved the problem of a book fund for his institution: "No special appropriation was asked for this year, since it was ruled by the board at my suggestion, that the buying of books was a matter of treatment at this institution and should come out of our support fund. Previously we had allowed about $260 for each biennial period. I think this sum should be increased by 50 per cent, which would make it more clearly sufficient for an institution of this size and kind."[70] There were in 1916, 170 patients in the Iowa state sanatorium.

It is the purpose of the orthopedic hospital to send the children out again, after medical care which has, as far as possible, removed their physical handicap, and after both educational and industrial training have helped them to be self supporting. Here the library is of importance, not only in supplementing the work of the school, but in helping to make the hours in bed pass quickly and happily. One of the most attractive library rooms in the country is that of the Minnesota State Hospital for Crippled and Deformed Children. Miss McGregor, the superintendent, says of it:

"The library is the cultural center and has a definite place in our school work. Each child has four regular library periods each week and the work done during these periods is not optional. The attractive room and beautiful books and pictures afford an incentive that no one ever resists . . . Story-telling has been a part of the library course for two years . . . The children give programs, appropriate to the special holidays, and no holiday goes by without special recognition."[71]

7. The Home for Soldiers, the School for Dependent Children, the Schools for the Blind and the Deaf

The homes for soldiers and sailors, and their wives and widows, have been established for some years and possess book collections of fair size. Few of these institutions are now purchasing books in any quantity, due probably to the fact that a majority of the readers are at an age when they prefer magazines and newspapers; many have excellent book collections.

[70] H. V. Scarborough. Letter of March 31, 1917.

[71] Minnesota State Board of Contro· .*Biennia lReport*, 1914-16.

Librarian of the State Institutions.[3] The duties of this supervisor, as discussed at the meeting, were: to pay regular visits to the libraries; to introduce a uniform system of classification, establish permanent records, and provide statistics of accession and of circulation; and to stimulate reading through the selection of books in each institution. In naming the first and the last duties of the supervising librarian they initiated a new form of library service to the institutions. It would have been possible to devote a sum of money to the classification of the libraries and the installation of permanent records; by the requirement of regular visits and expert selection of the books for each type of readers, they provided for a continuous and intelligent development of the libraries.

It was the desire of the president of the board, Judge G. S. Robinson, that the office of supervising librarian should be created by a special act, but it was considered undesirable at the time to urge such action. The method finally decided upon, was the appointment of a librarian who should be paid by each institution on the basis of the time actually spent in its service. Miss Miriam E. Carey, librarian of the public library of Burlington, Iowa, was appointed supervising librarian, beginning her duties in March, 1906.

The work was so thoroughly organized and so successfully administered under her supervision, that it was placed upon a permanent basis, and endured for a period when there was no one in charge of the libraries. In January, 1909, Miss Carey went to the Minnesota Library Commission as library organizer. From this time, there was no supervising librarian in Iowa until, in 1911, at the request of the superintendents, Miss Tyler, the secretary of the Library Commission, was asked to recommend a woman to the board of control. Miss Julia A. Robinson, at that time acting secretary of the Kentucky Library Commission was appointed and entered upon her duties in January, 1912. In September, 1913, upon the resignation of Miss Tyler to accept the directorship of the Library School of Western Reserve University, Miss Robinson succeeded her as secretary of the Library Commission. Miss Eliza E. Townsend was appointed supervising librarian, resigning in 1916. In 1917, Miss Grace Shellenberger was appointed to the position.

When Miss Carey went to the position with the Minnesota Library Commission, announcement was made that the advice and assistance which the commission gave to the public libraries of the state were at the service of those in the institutions. Miss Carey visited the institutions, organized several of the collections, and edited a column of institutional library notes in the monthly bulletin of the commission. In September, 1913, the Board of Control created the position of Supervisor of Institution

[3] *Iowa Bulletin of State Institutions* 7:515.

Libraries and appointed her to the office. She has thus had the responsibility of organizing the work in the first two states to place it under a special officer. The Minnesota plan differs in some respects from that of Iowa, where the supervising librarian, who had no central headquarters, spent her time between the several institutions. In Minnesota the work was centralized, first in the office of the library commission, and later in that of the board of control, and instead of payments for services being made directly by each institution, a monthly salary was named; this was, under a later plan, charged back, pro rata, at the end of the year. There was also provided a central office, where attention might be given to lines of work for the benefit of the institutions as a whole. Iowa had a considerable advantage over Minnesota, far outweighing that of the central headquarters, in the fact that it was, from the first, a settled policy, both of the Board of Control and of the superintendents, that a sufficient book fund should be appropriated yearly for each of the institutions.

The third state to make provision for the institution libraries was Nebraska. In 1911, through the vigorous efforts of Miss Charlotte Templeton, secretary of the Library Commission, the legislature voted a considerable increase in the appropriation of the commission, in order to provide books for the state institutions and the services of a librarian to have charge of the work. Miss Florence Waugh was appointed Librarian of State Institutions, Miss Nellie Williams succeeding her in 1916. The Nebraska plan was radically different from that adopted by either Iowa or Minnesota. The institutions provided library rooms and equipment wherever possible, and coöperated with the commission in furthering the work; the commission provided books and periodicals, amounting in 1914-16 to $2,250, money for binding, printing, and supplies, and for the salary and traveling expenses of the supervising librarian. The commission office was the headquarters of the librarian of state institutions.

To summarize briefly: in Iowa, the work was under the direction of the Board of Control, and the salary of the supervising librarian was divided pro rata; the money secured from visitor's fees to the reformatory and the prison was at first a general book fund,—later, each of these penal institutions used a certain amount of its gate receipts for book purchases, and each of the other institutions included a special book fund in its budget. In Minnesota, the Library Commission arranged that the organizer should divide her time between the public and the institution libraries. The Board of Control later took over the work, creating the office of Supervisor of Institution Libraries. The salary and traveling expenses of this officer were at first paid from the contingent fund of the Board of Control, under a later policy this was charged back to the institutions at the end of the year. There was no settled policy in regard to including a book fund in the annual

[illegible] of the institutions, this being left to the judgment of the superintendents. The Nebraska Library Commission furnished, from its funds, books and supplies for each institution, and provided the services of a librarian, the work was thus centralized at the commission office.

There are several states in which the supervision of the institution libraries might be assumed by the Library Commissions, or a similar agency, without additional legislation or board action. What is lacking in these states is a sufficient fund on the part of the commission to pay for the services of the supervising librarian, and, in the part of the institutions, a regular appropriation for books. Though the satisfactory solution of the problem is the appointment of such a supervisor, it is not necessary to wait until such action be taken. The Library Commission exists for the purpose of aiding the libraries of the state by friendly visits, by help in book selection and in cataloguing, and by the lending of books from the traveling libraries. The institutions have been slow to avail themselves of the aid which is freely offered them. In some of the states, traveling libraries and gifts of books have been accepted; in some, a few of the libraries have been classified and cataloged and the methods of recording book circulation have been installed. Some have sought advice in regard to discarding books not suitable for their use and in the selection of new books suitable for their purpose. The New York State Library published, in 1907, a list of books for insane hospitals, followed, in 1917, by the first revision of a list of books for prison libraries. In Oregon, where almost all the institutions are in the capital city, the state librarian has undertaken to provide reference books and the more solid reading, thus making possible larger purchases for the institution libraries. The size and excellent condition of the institution libraries of Indiana bear witness to the help received from their Library Commission. Eleven of the libraries have been classified, which have had frequent help in book selection and book buying, four of the institutions in 1917 employed teacher-librarians, who had received training in a library summer school.

CHAPTER IV

THE ADMINISTRATION OF THE INSTITUTION LIBRARY

1. The Book Collection and the Book Fund

That the book collections of the institutions should vary greatly, both in size and quality, is to be expected from the fact that few, proportionately, have been the result of a progressive policy of acquisition and administration; averages for all the institutions of a certain class are therefore of little value. Of those which sent replies to a questionnaire in 1916, the following have no libraries: eight insane hospitals; eight institutions for the feeble-minded; nine for delinquent boys and girls; one reformatory; five prisons; nine homes for soldiers; one home for colored children had no funds for books, but the superintendent's library was open to the children for an hour each day. As Iowa is the only state which has carried out, for a number of years, the policy of annual appropriations for the purchase of books for each institution, it will be interesting to note the size of these collections.

Iowa State Institutions[1]

	Added in Biennium	Withdrawn	Total Volumes
1905	5,034		41,909
1908	10,825	1,008	50,640
1910	3,206	630	48,532
1912	3,712	5,914	42,135
1914	5,334	5,376	40,255
1916	Not yet published		

It is evident that the large number of books discarded each year has prevented any perceptible increase in the size of the Iowa libraries. This is accounted for by two facts: first, the older libraries are more apt to contain many books which should be withdrawn, both because, in the early years, they accepted whatever was sent them as donations, and because there was no consistent policy for book selection and purchasing; secondly, because some of the institutions, particularly the orphans' homes, and schools for delinquents, and the reformatory and the prison, give the books hard service and necessitate wholesale renewals. Of the 11,290 volumes withdrawn in 1910-12 and in 1912-14, over half were from the reformatory and prison libraries. It is to be expected that the number of books discarded annually will soon decrease, and a point be reached at which the accessions will exceed the annual withdrawals.

[1] *Iowa Bulletin of State Institutions* 7:326-49.
Iowa State Board of Control, *Biennial Report*, 1907-8, 1908-10, 1910-12, 1912-14.

The type of institution determines whether the library for the officers and employees is included in that for the inmates. The hospitals for the insane have reference libraries for the medical staff, comprising works on general medicine and those in the special fields of psychiatry and allied subjects, as well as journals, transactions, and reports; it has not been the custom to include the volumes in this collection in the figures for the general libraries of the hospitals. A liberal supply of good reading matter can not fail to be appreciated in any institution. The problems of securing intelligent and reliable employees is one which all are facing, hence any means of furnishing desirable recreation and adding to the good spirit of the institution is cordially welcomed by the management. The official staff, as well, finds institution life confining and the community interests limited. Lectures, music, and theatres are in the cities, often beyond their reach, but books are a privilege which can be shared by all alike.

The two chief needs of the institution libraries are adequate financial support and adequate supervision. A regular annual appropriation for books is essential to proper growth and service; the libraries which have such a fund are those which can show an extensive use of the books. Here again, the figures for the Iowa institutions may be quoted, since they cover a term of years.

IOWA STATE INSTITUTIONS[2]

	COLLECTIONS	CIRCULATION	AVERAGE POPULATION	EMPLOYEES	READERS
1905	41,909		8,061		
1908	50,640	200,151	9,580		2,776
1910	48,532	429,652	8,725	1,404	3,089
1912	42,135	377,482	9,001	1,411	3,183
1914	40,255	520,651	9,309	1,507	3,668

CIRCULATION

1914, average circulation, 141.9 volumes per reader.
Magazines.....47.8 per cent
Fiction.....39.9 per cent
Non-fiction.....12.2 per cent

The following table gives the figures for the issues per reader of the libraries in eleven of the twenty-five largest cities of the United States, for the years 1914-15 or 1915-16. These will show a larger circulation per reader, than an average taken from all the public libraries of the country.

A difference in recording magazine circulation may affect these results in favor of the institution libraries, but not to any considerable extent. It should not be argued from these figures that the public libraries are failing

[2] *Iowa Bulletin of State Institutions* 7:326-49.
Iowa Board of Control, *Biennial Report*, 1906-8, 1908-10, 1910-12, 1912-14.

to reach a proper percentage of their population, but that the inmates of the institutions have more time for reading than those outside and fewer diversions to fill their leisure hours.

	Registered Readers	Volumes Loaned for Home Use	Volumes per Reader[3]
Philadelphia	165,648	2,730,173	16.4
St. Louis	100,717	1,690,037	16.7
Boston	112,199	1,910,320	17.0
Cleveland	163,418	3,023,156	18.3
Baltimore	44,929	696,111	15.4
Detroit	100,294	1,491,034	14.8
Cincinnati	101,132	1,660,216	16.5
Newark	62,005	1,194,817	19.2
Washington	47,296	802,998	16.9
Seattle	66,186	1,369,485	20.6
Providence	50,090	945,966	18.8

There are five ways in which the institutions at the present time can secure a supply of books for their readers. The first, and the only really satisfactory method, is the building up of a permanent collection through an annual expenditure, with possible additions of some donations which are found suitable for the purpose. The sum is not necessarily a large one, even that of fifty or seventy-five dollars, wisely expended will show results, and such results are the basis for future increase. That such a justification exists in the minds of the superintendents of Iowa is shown by the following replies to an inquiry, made in March, 1917:

1912–14	Annual Book and Magazine Fund	Should Be	Average Population Exclusive of Employees
Cherokee State Hospital	$250	$ .50– .60 per cap.	1,012
Clarinda State Hospital	250	300. –400.	1,162
Independence State Hospital	200	.20 per cap.	1,171
Mt. Pleasant State Hospital	250	500.	1,093
Institution for Feeble-minded			1,350
Industrial School for Boys	150	1.00 per cap.	395
Industrial School for Girls	250	2.00 per cap.	148
Reformatory	450	1.00 per cap.	675
Prison		1.00 per cap. a minimum	529
Hospital for Inebriates	150		174
Sanatorium			106
Soldiers' Home		500.	732
Soldiers' Orphans' Home			533
School for the Deaf	250	2.00 per cap.	215

The second method of securing books is that in use by the three insane hospitals and the two asylums for the chronic insane in Minnesota. Each institution contributes an annual sum, in this case $50, with which approximately 250 books are purchased by the supervising librarian. Twenty-five are sent to each institution in a box which may be used as a bookcase,

[3] *American Library Association Bulletin*, vol. 10. Statistics of Libraries.

they are kept a month and then sent on in a regular itinerary; at the end of the fifth or the sixth month they are added to the permanent collection and a new supply is received. By this method, each hospital adds to its library fifty books each year and the patients have the opportunity of using two hundred and fifty volumes. Miss Carey says of this collection:

> "As the purpose of the hospital traveling library is to provide recreation and change of thought, the books are selected with no other object in view. The collections are not educational, except incidentally, nor of special literary value. They are made up almost entirely of fiction, with any popular books on the questions of the day which may be available, and a few purely humorous books, which are always well liked by some of the patients. Additions are chosen, so far as it is financially possible, for good print and paper, illustrations, and attractive and serviceable binding."

This plan has proved practicable for other groups of institutions of the same type, such as the county sanatoria of Wisconsin. In Oregon, since most of the institutions are located in Salem, it has been possible for them to provide certain classes of books from their own funds, and to depend upon the state library for reference books and those less often called for. Since the readers in the institutions have little initiative in procuring the books they need, and must depend upon the officers and attendants, this method would probably not be successful if the state library were not in the same city.

It has been a practice in some states to depend for books upon the traveling libraries of the state library commission, but this method, except for a temporary measure, has failed to accomplish results, as shown by reports from many of the institutions. These libraries are necessarily small, since the collection is never equal to the demand from libraries, schools, and study clubs; this fact alone makes it difficult to secure books suited to the special problems of the institutions; fifty, seventy-five, and even the occasional one hundred volumes a year, can not meet the legitimate demand for reading material. In the case of one of the insane hospitals and two schools for delinquents, the institution has been designated as a branch library of a city or county system. There is, of course, a question here in regard to the adequate increase of the book collections, and the problem of purchasing books adapted to the special class of readers.

2. The Library Room

When, in 1905, Mr. Johnson Brigham, state librarian of Iowa, said that it was desirable that each institution should have a central library and reading room, he spoke to a group of superintendents who were already building up good-sized book collections and had, in some instances, provided for their accommodation. To-day, Iowa, Minnesota, and Nebraska have permanent quarters for the libraries in most of the institutions, and

Indiana, at least, is not far behind them. Reading rooms in educational institutions and in those for children are in most cases considered in planning the buildings; many of the schools for delinquents have provided library rooms; some of the sanatoria for tuberculosis and the hospitals for those injured in the mines, have set aside rooms for the library. There are attractive reading rooms in several of the state insane hospitals, in addition to those in the three states mentioned.

The patient who acted as librarian in one of the Minnesota state hospitals, wrote repeatedly concerning their need for quiet reading rooms.

"Each day coming more in contact with the readers, I realize what a library means to them. It is in many instances our only soul salvation, and, were I to live long enough, I would persevere until I had a building and library, where all readers could go and sit off the wards and enjoy brain rest,—a place to read out loud and explain the books. Others can not read for fear of strained eyes or mental application."[4]

In addition to their reading rooms, the hospitals have book cases in the wards or day rooms, where a selection of attractive books may be displayed and be frequently renewed. The idea that insane patients would not read was strengthened, in most cases, in the hospitals where the same collections of uninteresting books remained on the wards for month after month.

Some institutions for delinquents, and at least one for the feeble-minded, prefer the plan of having the book shelves in the living rooms of the cottages. There are some advantages in this, if there is a good-sized central library, where the collections may be sent for frequent exchange and from which special requests may be filled. There is, however, an advantage in the atmosphere of a library room and in the possibility of browsing among the books and extending acquaintance with them. In all these institutions magazines should be freely provided for the wards or the cottage rooms.

Even the prisons may some day have reading rooms to which the trusted men are allowed to go; the Warden at the federal prison at Fort Leavenworth would welcome such a plan, and the Warden at Fort Madison, Iowa, states that one of his needs is a reading room where a hundred men might attend at night. The Warden of the workhouse and reformatory of the District of Columbia, thus describes their library room:

"A rest hall and library, one story, of a capacity for comfortably seating a hundred prisoners has been provided, with room for them to promenade from one end of the building to the other. All the prisoners are taken care of in this building after the day's work is done and they remain there until bed-time, playing checkers, reading the daily newspapers provided by the management, singing, talking, and having access to a library of 4,000 good books provided by the Public Library at Washington. This building has neither locks nor bars. We have ten paid officers to take care of these 600 prisoners."[5]

[4] Letter of June 8, 1915.

[5] W. H. Whittaker, *American Prison Association Proceedings*, 1915, 72.

3. The Library Service

As the term institution stands for something more than the population and the buildings, so the term library is associated with more than a collection of books and the room for housing them. Though the profession of librarianship is comparatively new, the present movement toward the certification of librarians shows that it is winning recognition, as a definite field for which general education and special training are necessary. There are to-day, in the several library schools, over 300 students, about one half of whom are college graduates, and two of the schools offer a two-year course on a graduate basis; a majority of the graduates of these schools will go to administrative positions.

The employment of a trained librarian is an admitted advantage to the public and the college library, but it may be questioned whether there is equal need for education and training on the library service of the institutions. The three chief tests of the librarian in the institutions are,—ability to select books wisely and purchase them economically; to extend the use of the library and to foster the knowledge of books and the desire for reading; to classify and catalogue the collection; and to install records which will show the rate of increase in the size of the collection and in the circulation of the books. The trained librarian knows how to expend the small book fund to the best advantage. This presupposes an acquaintance with the regular dealers in the book trade and the discounts which they are able to make to the libraries; with the opportunities for securing books by taking advantage of book bargains and seasonal sales at stock-taking time; with the publishing houses and the character of the books which they issue; with various editions of the same work and their excellence as to type, illustrations, and binding; and with the sources of supply for inexpensive pictures, to supplement the study of history, geography, literature, nature study, and mythology.

This knowledge is, nevertheless, of far less importance than that necessary for the selection of the books which shall be read. This requires a knowledge of people, as well, and the power to understand their needs and realize their point of view. The reader outside may supplement the public library by his own purchases, the inmate of the institution is restricted to the books which are already available. No education is ever broad enough to afford an adequate knowledge of the books worth while, and the librarian is, happily, a student to the end of his days of service. In the varied types of the different institutions he will find a test of his powers. The books must be readable, for while the purchase of uninteresting books may be a mistake in another library, in the small collection of the institution it is a serious fault; they must be wholesome and of good tone but not necessarily, except those for young people, of real literary merit; they must combine informa-

tion and recreation in good proportion; and, finally, the choice must be based on an insight into the special needs of the several institutions. It is possible, from the experience of those who have studied the problem, to formulate a few principles which should govern the choice of books for these libraries. The subject of book selection for the deaf and the blind, for children, for delinquents, for the feeble-minded, and for the patients in the sanatoria, has already been touched upon; the standards for selection for the insane and the prisoners may be discussed more thoroughly. In neither of these institutions should there be an effort to build up a balanced library, both scholarly and comprehensive. Miss Carey, Miss Jones, and others have found that the insane are fond of romance and adventure, an absorbing book, such as a good detective story, is of value to arouse interest and stimulate mental effort; over-emotional, morbid, or depressing books, those with religious discussions or touching upon insanity and crimes of violence, should be excluded. The humorous book should not be forced upon the despondent patient, nor will short stories find many readers, though the small book between the novel and the magazine story, is a favorite with the bed patients. Type, illustrations, and bindings should be attractive. It is interesting to note that the insane are readers of travel, biography, and history. Dr. Crumbacker of the Independence, Iowa, hospital, says: "It has been a matter of surprise with me to see the interest that has developed. With us, I think they read more history and biography than the average town or city library gives out. Of course, historical novels are largely read."[6] Dr. Chase, of the Friends Hospital, Philadelphia, recommends a varied selection. "A well-selected library, containing books of history, travel, biography, essays, poetry, and fiction, and an assorted list of current magazines, periodicals, pictorial and daily newspapers, is very desirable for patients."[7]

The prisoner has been taken from his home and his community, to be released, in most cases, after a short term of imprisonment. He is more apt to be weak, untrained, and uncontrolled, than deliberately wicked, and the main purpose of his incarceration should be to give him every chance for improvement. Says Warden Jones, formerly of the Iowa state prison: "To those who declare the object of criminal punishment to be the protection of society from the criminal, we say the transformation of the criminal into a serviceable member of society is the only effective protection of society against him."[8]

Whatever the lack of the American prison, as to school facilities and training in trades, most of the prisons have libraries of fair size and they are thoroughly used. It is a truism that the occupations of a man's leisure

[6] W. P. Crumbacker, *Iowa Bulletin of State Institutions* 16:341. October, 1914.

[7] *Mental Medicine and Nursing*, 197.

[8] N. N. Jones, *Iowa Bulletin of State Institutions* 1:518.

hours are the best test of his character and his tastes. It is unfortunate that the management should be careful to provide clean entertainments,—ball games, motion pictures, concerts, and lectures, and should regard so carelessly the worthless and often immoral books which pass freely through the cells. Fiction purchased for the prisoners should be read with them in mind, for the characters in the books are, in a real sense, companions to the readers. The books should not be colorless nor weakly sentimental, nor is the conventional happy ending desirable. These men are not innocent,—they know the facts of life; temptation, sin, and retribution are not to be covered up or hinted at, or used to point a moral. If the officials of most of the prisons would delegate to the secretary of the library commission, or to some other librarian in the state, the task of eliminating objectional and unreadable books, and would provide funds for the purchase of good strong fiction, interesting biography, travel, history, technical books, books to aid in teaching English, and books on citizenship, they would find it an investment which paid for itself many times over, in the returns of good discipline and the promise of better citizenship.

The public librarian of the present day does not consider his most important task done when the books have been selected, purchased, and prepared for the shelves. There still remains the duty of making them living forces in the community, the delightful task of developing an interest in reading and suggesting new lines of study. For reader and librarian alike, there is the stimulus of mental growth. So, in the institution library, there is the same possibility of personal service to the readers: books must be chosen with special readers in mind; others must be encouraged to browse in new pastures; interest may be aroused by reading aloud; reading courses may be planned; and material gathered for debates or for essays, or for the teachers.

This is the work which the librarian and the teacher must share; it is the field in which the teacher-librarian has so successfully advanced the interests of the institution library; the two essential requisites are a knowledge and a love of books, and a genuine interest in the readers. Dr. Applegate of the Mt. Pleasant hospital, Iowa, comments upon the need for care in guiding the reading of the insane, and adds, "If the librarian does not know the books she is giving out, I believe she will not have much success in accomplishing good in our hospitals for the insane."[9]

Dr. A. C. Hill, inspector of prison schools in New York State, in a paper read before the American Prison Association, said of the prison librarian:

> "No one in the prison has a greater responsibility upon him than the one who buys the books and puts them into the hands of prisoners. It is not a task to be lightly undertaken or carelessly performed . . . The school proper teaches the men to

[9] C. E. Applegate, *Iowa Bulletin of State Institutions* 6:336. October, 1914.

read and gives them a start in the use of the art. Then the librarian continues the work by suggesting and providing food for the minds and imaginations . . . He has a tremendous responsibility and should be well informed, tactful, and conscientious. A trained and reliable librarian is nowhere more needed than in a prison library."[10]

Finally, we have the plea of a patient in one of the insane hospitals:

"We do so need soul built up here and something to start a train of good thought and cheer-up amusement. It does seem as if the state could hire a good, beautiful, strong woman to be librarian here, whose duties it would be, not alone to tend books, but go on the flats, see that the patients received books, read to them, cheer them, and provide intellectual entertainments. Each dining room could be used, have a reading hour and story hour."[11]

Another duty of the institution librarian is the organization of the library and the installation of proper records. There is a system of classification which permits of infinite expansion without renumbering; it is, moreover, a system in general use in libraries and a familiarity with it will prove a service to one who endeavors to continue the habit of reading after leaving the institution. The essential records are: the catalogue which tells what books are in the library; the shelf list, which serves both as an inventory record and an index of subjects; the accession book, in which all volumes are entered as they are purchased; the checking file of the receipt of periodicals; and the loan record of individuals to whom books are charged out, which forms the basis for compiling statistics of circulation.

These records serve other ends as well; they show the strength and the weakness of the collection, the lines along which it should be built up; they show what books are not read, and should therefore be discarded, or some effort made to create an interest in them; they record the amounts spent for fiction and for non-fiction; and they afford a basis of comparison with the statistics of other libraries. The institution which does not keep a careful record of the growth of the library and the extent of its use, is unable to render a proper cost-accounting for this expenditure of the public money; the institution library which is locked during most of the week, and intermittently or carelessly administered, is making poor returns for the money invested.

Since the efficient institution library has, in addition to a regular book fund, a provision for continuous and intelligent supervision, the question arises as to whether this service should be performed by a state supervisor; by a resident trained librarian who has no other duties; by an officer or employee who has this duty in addition to regular full-time work; or by one of the inmates of the institution, a patient, a member, or a pupil.

The supervising librarian comes to the institution with the prestige which a state official enjoys; she is not only the representative of a state

[10] A. C. Hill, *American Prison Association Proceedings*, 1913, 161.

[11] Letter of September 15, 1915.

board, but has had training and experience in her own profession and thus has the confidence and coöperation of the institution officers. Through her knowledge of the needs of the library, she is able to strengthen the collection by the addition of new books, the replacement of those which are worn out, and the discarding of others which are unsuitable; by classification and the installation of records, the collection may be made usable. A special advantage lies in the fact that the assistance given by the inmates of the institution is of value to them as well as to the library. Aid in preparing books for circulation, in making records, in binding and mending, affords a real educational opportunity and a light and agreeable occupation to those who are not able to perform other tasks. The visit of the supervising librarian is often made the occasion of talks on books and reading; Miss Carey's suggestion of ten years ago, of required literature courses in the schools and courses in reading for the prisoners, would seem to offer great possibilities. Warden Robert W. McClaughry, then at Joliet, commended such courses in a paper read before the American Prison Association in 1898.[12]

Nor does the interest of the supervisor fail to extend to reading privileges for the officers and employees, though, as the funds are limited, the library can not be selected with their needs as the first consideration. It is possible to provide new and popular books through the so-called "rental collection," in use in many public libraries. A sum of money is advanced, with which new books are purchased, which are loaned for a small daily fee, usually two cents. When a book has paid for itself, the rental fee is abolished; magazines may be circulated in the same way.

The medical libraries in the hospitals need careful organization, catalogues and other records are necessary, and reports, journals, and pamphlet material must be filed. The proper care of such a library requires the constant supervision of an educated person trained in library methods. Another important development is the courses given in the nurses' training course suggested by Miss Carey in 1913.[13] Such courses in literature and art were first given by Miss Jones at the McLean Hospital in 1913, and continued since, with the addition of one on current events.

"Since the hospitals are not able to select for their training schools only those nurses who are already well educated, obviously the next best thing to do is to try to give them, during their period of training, a broader culture and a wider knowledge of the things which make for companionship . . . These courses have proved very successful. The nurses have responded with an enthusiasm which has made the giving of these lectures a delight, and the effect was immediately felt upon the wards. Nurses read more and better books, and they have interested the patients in the lectures so that many of them have been roused from their lethargy to help, criticize,

[12] C. R. Henderson, *Penal and Reformatory Institutions*, 184.

[13] Miriam E. Carey, *Iowa Bulletin of State Institutions* 15:175-76.

and supplement the nurses' notes from their broader knowledge. To many of the nurses a new world of books and pictures has been opened."[14]

The course on books and reading included twelve lessons:

1. Use of the library: arrangement of the books; method of charging books.
2. Reference books, periodicals and newspapers.
3. Getting patients to read; what to avoid, what to suggest; reading aloud.
4. Books on history, biography, art, economics, sociology.
5. Outdoor books; games and occupations; handicrafts.

6– 9. Fiction.

10–12. Poetry.[15]

Perhaps the best endorsement of the work of the supervising librarian lies in the action taken by the superintendents of the Iowa institutions, asking that such an officer be again appointed, after the work had lapsed for three years. Some two years after the organization of the work in Iowa, the Board of Control wrote to the superintendents, requesting their opinions in regard to its value.

"The head of one institution thought that such work was not necessary, that he was capable of doing the work, but if there was to be a state librarian, Miss Carey was the one for the place. The other fourteen were warm in their praise for the work, several letters from the hospitals for the insane spoke of the remedial effects of the work of the library on the patients. All these institutions regarded the work very highly."[16]

At the conference shortly before the work was resumed, several of the superintendents voiced their appreciation of the value of the supervising librarian to their institutions:

"There is not anything about our institutions that can be made more valuable than our libraries, yet without some one technically and intellectually fitted to look after that department of the institution it will not receive the encouragement it should have, and will not be used as it should be, and will not be a factor in doing good that it should do . . . It was particularly noticeable that some of the boys increased very much in their progress in study, after the idea of reading was encouraged and brought out as it was when we expected Miss Carey to come regularly, who knew how to talk to us, and how to advise us in the matter of the best books to read, and the way to read them."[17]

"I have never in my experience in hospital work seen anything like the progress in library development which was made in our institution and other institutions of the state, during the time we had a general librarian, and I suspect that the other superintendents will agree with me in saying, that the last two years without this supervising head we have made little or no progress. We have done well if we have

[14] Edith Kathleen Jones, *American Journal of Insanity* 72:298.

[15] *Ibid.*, 301-3.

[16] *Iowa Bulletin of State Institutions* 13:130. 1911.

[17] W. L. Kuser, *Iowa Bulletin of State Institutions* 13:126-27. 1911.

kept up to the standard that was evolved during the time that we had a librarian, and I think it behooves each and every one of us to restore that condition if we can."[18]

There is, as yet, no state or federal institution which employs a librarian who has had training in a library school. The McLean Hospital, where Miss Jones has filled the position since 1904, is a private institution. It would seem as if a state hospital, which is an institution for scientific research as well as for custodial care, might consider the appointment of such an officer, to divide her time between the library for the patients, and the reference collection for the use of the medical staff. The medical journals, the transactions and bulletins of societies, and the reports of other institutions, should be checked as they are received, and note made of articles of special interest to any member of the staff. A record should be kept as these are issued to anyone, and at the end of the year they should be carefully collated and prepared for binding. The pamphlet material of value should be filed in boxes or placed in binders upon the shelves. The case records require careful filing and supervision, and, if the hospital issues any publications, there would be need for editing and indexing. A trained librarian is supposed to be fairly familiar with physiological and chemical terms and with foreign languages, and hence able to collect material for reports or papers, by consulting the indexes to journals. This work, in addition to that for the patients and the courses given in the training class, should eventually take the full time of a trained librarian; if the library were small and developing slowly, the position might be combined with that of the teacher of kindergarten, or handicrafts.

Such a combination of teacher and librarian offers great possibilities in the institutions for the feeble-minded, for delinquents, the schools and hospitals for children, and those for the blind and the deaf, and even the prisons, as well; in several such institutions, the teacher who gives part-time library service has attended a short six-weeks course offered by the library commission. This is an excellent beginning, an augury of the time when there will be a general demand for some one with more training along the lines of book selection and the use of reference books, and with a knowledge of books in various lines, particularly literature for children.

In many of the institutions to-day an employee,—the stenographer, or mail clerk, or telephone operator,—gives the library what time can be spared from regular daily duties. An officer who has a knowledge and love of books will be interested in building up a good collection, but it is needless to say that there are usually few hours available for studying the needs of the library or for widely extending its influence.

There is occasionally an inmate who has had a good general education, and is familiar with books; such a person will do excellent work under a supervising librarian. Without such supervision this plan is seldom success-

[18] W. P. Crumbacker, *Iowa Bulletin of State Institutions* 13:127. 1911.

ful, for the term of service is rarely continuous, either by reason of illness or of a short period in residence. "The problem of library service in the hospital," said Miss Carey, in 1907, "is the attendant." There is to-day the same problem of enlisting the aid of the employee who is not interested in extending the use of the library; the librarian who can overcome this indifference must have the authority of a regular officer of the institution.

CHAPTER V

ACTIVITIES OF LIBRARY ASSOCIATIONS IN REGARD TO INSTITUTION LIBRARIES

The first recognition on the part of librarians that the institution libraries were a new and important field of service, came in 1907, when, at the conference of the American Library Association, Miss Carey read a paper on the work as initiated and carried on in Iowa. As a result of the interest aroused, the League of Library Commissions, meeting at the same time, appointed a Committee on Library Work in State Institutions. At the meeting of the league in 1908,[1] the committee reported that it had sent a questionnaire to the commissions of the several states, asking what attempts had been made to coöperate with the officials of their institutions. Twenty-eight commissions replied:—in one state, books were purchased for special traveling libraries to be sent to the institutions; five commissions gave frequent assistance or advice; ten had attempted coöperation, two reporting that their offers had been received with indifference, and two that their aid had not been welcomed; twelve had made no effort to approach the management of the institutions. In most institutions they all agreed there was no financial provision for purchasing books or administering the library.

In 1909, at the meeting of the league,[2] the committee, in its second and final report, emphasized the great demand for books on the part of the inmates of the institution, who lacked the means of initiating better library facilities. It, therefore, recommended that the commissions should make every effort to get in touch with the institutions, and suggested several methods of approach. They should secure statistics of the institution libraries and include the figures of accessions and book circulation among those of the other libraries of the state; librarians should visit the institutions and, if opportunity arose, give brief talks on books; they should send to them, as to the public libraries, the monthly numbers of the American Library Association *Book List*, a selection of the new books recommended for purchase, with descriptive annotations; they should offer help in book selection and book buying, and should volunteer to send traveling libraries to the institutions, especially to the insane hospitals.

At the meeting at which this report was presented, Mrs. Percival Sneed, of the Georgia library commission, asked that a committee be appointed to consider the question of libraries of the federal prisons; the warden of the Atlanta penitentiary, she said, had spoken at a recent meeting

[1] *American Library Association Bulletin* 2:312-13. 1908.
[2] *Ibid.*, 3:339-41. 1909.

in regard to the library needs of his institution. A Committee on Libraries in Federal Prisons was appointed, and made its first report in 1910.[3] It had communicated with the wardens, receiving the information that the government had made no appropriation for books at the Atlanta prison; that, at the Fort Leavenworth penitentiary, additions were made "as often as there are funds to buy books"; and that the library of the prison at McNeill Island, Washington, had no financial support except from visitors. As the federal prisons were under the control of the Department of Justice, the committee communicated with the Attorney-General, suggesting the need of financial support, and adequate supervision for prison libraries. The Acting Attorney-General replied that in his opinion the appropriation was sufficient, the administration of the libraries satisfactory, and any change in the policy of the department was neither "necessary or advisable." The committee closed the report with the suggestion that librarians be asked to visit the institutions, to confer with the wardens in regard to the proper library standards for the organization and supervision of the book collections.

The second report of the committee, at the meeting of the league in 1911,[4] stated that each institution had been visited by a librarian, who had reported to the committee as follows:

"At Leavenworth, the warden was anxious to improve conditions, and gave the visitor permission to withdraw some objectionable books. Each cell contained two men, and the electric light was so arranged that the man in the lower berth could not see to read; the warden was anxious to have a reading room to which trusted men might be sent. There was no fixed appropriation for books, no new magazines were subscribed for, and there was no prison school. At Atlanta there was a school, but there were no funds to purchase books for the general library. At McNeill Island, practically all the books were donated, there were few, if any, purchases."

The committee had already been in correspondence with the Acting Attorney-General, who wrote, in January, 1911:

"The Attorney-General is empowered to incur such expenses for library books as he deems proper and advisable. Under this sub-appropriation the Attorney-General is authorized to purchase as many books, as in his judgment are required. Should the appropriation be found at any time insufficient for the purchase of an ample supply of books, the Department, in submitting its estimates of appropriations to Congress, would ask for an increase in the sub-appropriation. It has never been found advisable as yet, to ask for any increase for this purpose, and I am of the opinion that no increase is necessary."

He wrote again in February:

"Some time ago the attention of Congress was called to the necessity of providing teachers for the prison schools, but Congress did not accede to the request, and we have at present no school teachers in the prison, other than the chaplain, and now and then a guard who is more or less accomplished in teaching."

[3] *Ibid.*, 4:734-38. 1910.

[4] *Ibid.*, 5:206-10. 1911.

In commenting upon this statement the report said:

"While the library can be of great value in an educational system in the penitentiaries, its usefulness is nowise dependent on such a system . . . the reading of recreational and inspirational books alone would more than compensate the penitentiary for their cost, and there are hundreds of prisoners of education who are not dependent upon a special system for the enjoyment of reading. The greatest value of the books will not be secured until they are in charge of skilled persons, who can select them most intelligently and make their contents accessible through modern library methods; but it is a disgrace that a wealthy nation should limit the reading even of its prisoners to books that are filthy and in rags and which are largely chance contributions by visitors."

At thé meeting of the league in 1912,[5] the committee report stated that the Department of Justice had ordered printed catalogues to be issued for the book collections at Atlanta and McNeill Island. The McNeill list showed the inadequacy of the library and the great lack of books of any real value. The Attorney-General then wrote to the secretary of the American Library Association, asking for a list of $100 worth of books, excluding fiction, to supplement the library at McNeill Island. At the request of the secretary the librarian at Tacoma visited the penitentiary and made a choice of books not represented in the collection. Reports from the prisons showed that at Atlanta all books bought from the general fund were school books, magazines that were either subscribed for by prisoners or sent by their friends; magazines for the library at Leavenworth were obtained in the same way; the warden at McNeill had secured about fifty magazines by soliciting them from the publishers.

During the discussion which followed the report, consideration was given to a plan to introduce into Congress a bill to provide adequate library facilities for the prisons. It was finally decided to endeavor to secure the coöperation of the American Prison Association, as well as to have personal interviews with the Attorney-General, in order to present the necessity for a more liberal financial policy. The need of a buying list for prison libraries was also discussed at the meeting.

The fourth and final report of the committee was made at the 1913 meeting of the league.[6] As the result of personal action by librarians, there had been a prospect that the budget of the Department of Justice would include at least twenty-five hundred dollars each for the prisons at Atlanta and Leavenworth, and five hundred dollars for that at McNeill Island. The effort to secure this increase was, however, unsuccessful.

The New York Library Association has had a standing Committee on Prison Libraries since 1909. At the meeting of the association in 1912, a session was given over to the discussion of libraries in penal institutions.

[5] *American Library Association Bulletin* 6:324-28. 1912.

[6] *Ibid.*, 7:374. 1913.

The report of the committee, presented at this time,[7] recommended that an effort be made to secure a legislative act, creating the office of supervising librarian for state institutions. At the meeting of the succeeding year,[8] the Association voted to recommend to the State Prison Commission the appointment of a library inspector for penal institutions. The chairman of the State Prison Commission requested the state library to investigate the libraries in penal institutions; as a result of this survey the committee submitted to the Prison Reform Commission a report, closing with a request for an increase in the appropriation for the libraries, the printing of a buying list of books for the prisons, and the appointment of a supervising inspector, as well as a competent civil librarian, for such institutions. The Prison Reform Commission accordingly recommended to the Governor that attention be given to improving the libraries of penal institutions, and that their administration be placed under the state library. No legislative act authorizing the appointment of a supervisor has yet been passed, but the state library, at the request of the Prison Reform Commission, has prepared a list of books for prison libraries, the first section of which was issued in 1916.

The efforts of the American Library Association for institution libraries, have been along other lines than an attempt to secure legislation or appropriations. In 1913, the association published a list entitled, *A Thousand Books for the Hospital Library*, compiled by Miss Jones of the McLean Hospital, with additions and annotations by the institution librarians of Minnesota, Iowa, and Nebraska. This was intended to serve as a buying list, as well as an aid to nurses in suggesting means of interesting their patients in reading; it was sold, like the other publications of the association at a price which merely covered the cost of publication.

In 1915, the executive board of the association appointed a Committee on Library Work in Hospitals and Charitable and Penal Institutions. One member of the committee has published and distributed several articles on libraries in insane hospitals, the most important of which was a syllabus on a course in books and reading for a nurses' training class; in addition, she edited for some months a department on institution libraries for the magazine, *The Modern Hospital*. The chairman of the committee took charge of the section meeting on institution libraries at the 1916 Conference of Charities and Corrections, at which the results of a survey of the institution libraries of the United States were presented. A *Manual for Institution Libraries* was prepared by another member, and published by the American Library Association. This attempted to present in practical form the standard methods of library practice, which were adapted to conditions in institutions. The committee has made a collection of pictures of institution libraries, to be used at state charities and corrections conferences, and as a reference collection to be loaned to superintendents or to others interested.

[7] *New York Libraries* 3:230-33. 1913.

[8] *Ibid.*, 4:144-47.

CHAPTER VI

THE FUTURE DEVELOPMENT OF THE INSTITUTION LIBRARY

It seems certain that in the future development of the institution libraries, they will be under either the board of control or the library commission, or a similar agency. If placed under the library commission, the work has the advantage of continuity with the other library interests of the state: the executive officer of the commission is alive to the possibility of further service and the connection promises permanency, a coöperation in the use of books and other collections, and the influence of accepted standards in regard to records and equipment. On the other hand, if the institutions have been placed under the board of control it would seem that the supervision of the institution libraries might well be considered the duty of an officer of the board; in either case there should be a supervisor, whose authority should come from the board of control.

Realizing the special problems of the institutions, the superintendents in Iowa, in 1905, and again in 1911, urged the selection of a woman for the office. The reformatory and the prison are the only institutions where a different choice might be urged; experience has shown that the solution lies in the appointment of a woman of maturity and judgment, as well as education and training, and experience in her chosen field. In order to secure such an incumbent of the office, the salary paid should range from $1,500 to $2,000 per annum.

Both economy and efficiency would be increased if suitable headquarters were furnished and the work was centralized. It is an advantage to buy books in the open market, and a considerable saving could be effected in the book fund of each institution, if the latest publications were purchased from a library agent and other books obtained at sales or by personal visits to second-hand dealers. The office equipment should include the usual lists which aid in book selection, and might well have a union list of the books in all the institutions, to prevent duplication in buying and to aid in building up weak departments. There should be samples of library furnishings and supplies, such as magazine binders, newspaper files, book supports, and similar equipment. This plan would presuppose office room and clerical and other assistance when necessary.

The library of such institutions should be a separate department, recognized in its budget by a regular annual appropriation, and the statistics of its growth and use included in the annual report of the superintendent. There should be a minimum of one thousand volumes for each institution. As was suggested by Miss Carey at the Iowa quarterly conference in

December, 1916, the penal institutions which receive visitors' fees, and are also provided with able-bodied workers of sound mentality, might build up a collection of books in foreign languages and the technical trades, to be loaned, as need arose, to the other libraries. One institution might undertake the binding of all the magazines, another the care of a joint collection of victrola records, music scores, and pictures.

In the insane hospital, at least, and eventually in most of the institutions, a trained librarian should administer the local collection, giving in most cases part-time service to the school. The assistance of the inmates should be sought, not only for the practical value of their service, but also on account of the benefit they will derive from such employment.

What after all is the real justification for an interest in the institution libraries on the part of both the officials, and the public which supports the institutions? Miss Carey, who has done more than anyone else to arouse this interest, has stated it thus:[1]

"It is not that books may be bought from time to time or that they may be taken care of according to the latest methods; it is not that accurate statistics may be had at a moment's notice, or that the library may make as good a showing as other departments, but it is that the use of books may increase, and not only that more people may read, but that they may read better books individually; it is that the reading habit may be incorporated into the life of each resident in an institution; that no person set apart from society may be denied any privilege connected with books or derived from them, which the freest, richest, happiest, or best citizen enjoys elsewhere. Books are perhaps the only things of which this may be possible in institutions. Food, clothing, shelter,—these may be, and are . . . good and adequate, but they can not be the best in existence, from the nature of the case. But of books, the very best are as easily provided in a hospital as in a palace, in a school for feeble-minded as in a university, for the merit of a book does not lie in the costliness of its binding or in any outward sign of excellence."

[1] Miriam E. Carey, *Iowa Bulletin of State Institutions* 13:86. 1911.

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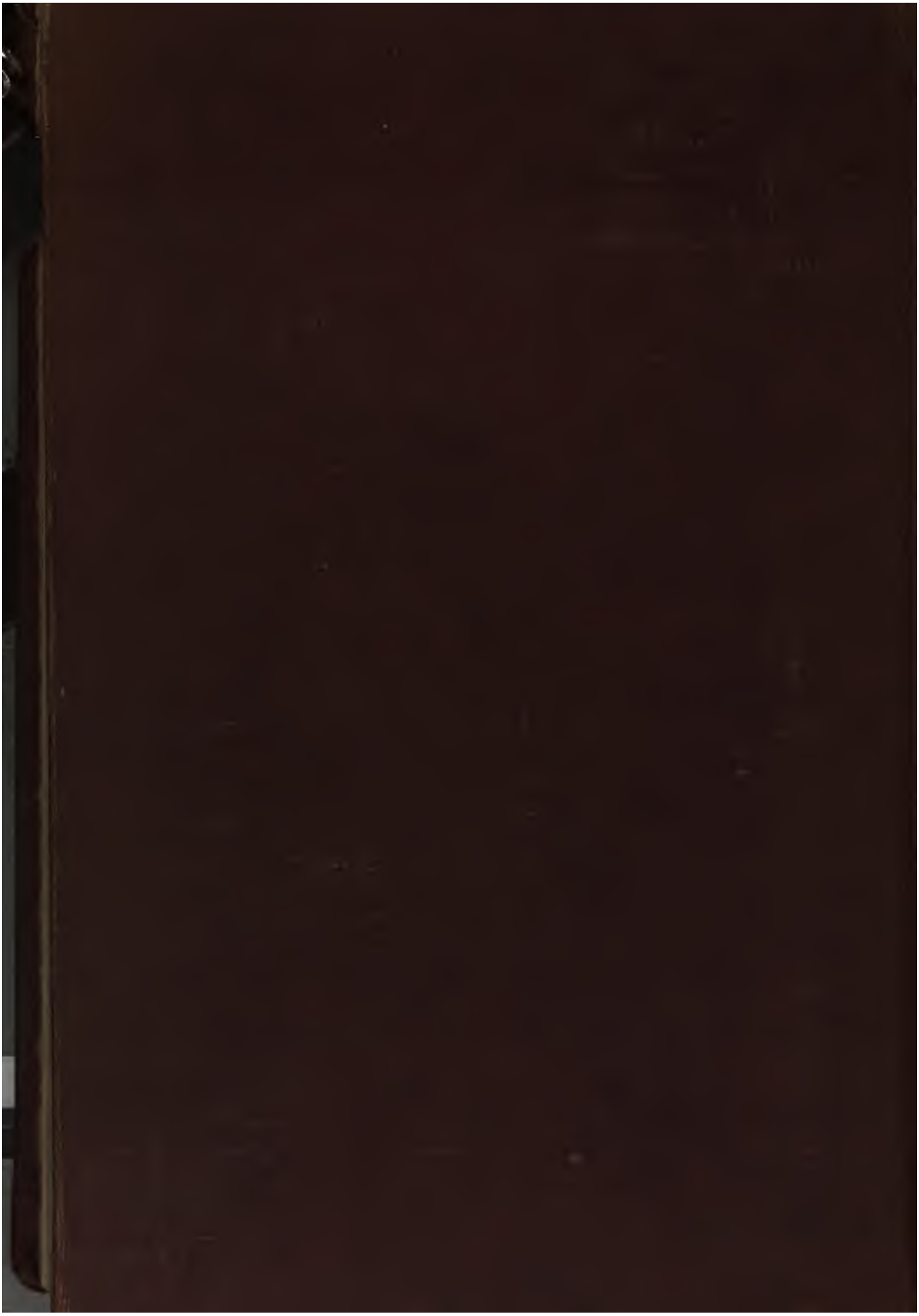
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